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NATURE NOTES,

THE SELBORNE SOCIETY'S MAGAZINE

EDITED BY

JAMES BRITTEN, F.L.S.,

OF THE BRITISH MUSEUM.

—

He prayeth best who loveth best
All things both great and small;
For the dear God who loveth us,
He made and loveth all.

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THE GERMINATION OF MUMMY WHEAT.

THAT it is very hard to destroy a popular error is apparent from the tenacity with which multitudes believe in the vitality of grains of wheat which were enclosed thousands of years ago in mummy cases. There seems, as the story is told, abundant evidence from credible witnesses that grains of wheat taken out of an ancient coffin have germinated, and that fields of mummy wheat, unlike any of our British wheats, have been grown in England.

I have had occasion to look into two cases of the asserted germination of mummy seeds. In the one case, the late John MacGregor took, as he believed, four seeds out of a coffin, the property of the Duke of Sutherland, two of which germinated in his room in the Temple. As soon as two young plants were seen, the pots were sent to the Botanical Gardens, Regent's Park, where they were carefully tended until they seeded. Mr. MacGregor had a good photograph taken of them, a copy of which is before me. No one who knows anything of the character of the late Mr. MacGregor can for a moment doubt his *bona fides*. The two plants produced from the seeds were oats, a grain unknown in ancient Egypt! How the seeds got into Mr. MacGregor's flower pots may be imagined; there is no evidence. He tells us that the other two grains taken by him out of the coffin were sent, after they were found, to Mr. Sowerby at the Botanic Gardens. In his practised and careful hands they failed to germinate.

A somewhat similar instance is recorded by the late Professor Henslow in a paper read to the British Association in 1860 (Reports, p. 110). It was "the case which had been relied on so much, of the growth of mummy wheat by Mr. Tupper from

seeds supplied him by Sir Gardner Wilkinson. He alluded to a sample of mummy wheat which he had carefully inspected grain by grain, and found among it two grains of a different variety from the rest; these were perfectly fresh, whereas the others were dark-coloured, with decided indications of decomposition and partial charring. Upon inquiry he was able to ascertain that this sample was a portion of a large stock, which had been taken from a catacomb some years previously, and had been exposed for sale in the jars of a corn merchant at Cairo. There could be no doubt an accidental admixture of a few recent grains left in the jar had taken place. In samples supplied by Sir G. Wilkinson to the late Robert Brown for the purpose of experiment, the latter had found in it a few grains of Indian corn! He thought it not at all improbable that the samples he had examined, and those furnished by Sir G. Wilkinson, might have formed portions of the same stock."

In the other case to which I have referred, a quantity of peas were said to be the produce, after a few generations, of some seeds taken by my correspondent's brother out of a mummy case. I obtained a specimen of the plant on which the peas grew. It was not our cultivated pea. I communicated with the brother and found that he did not himself find the mummy peas, but had bought them from an Arab who said they were taken from a mummy case! The peas belong to the species now commonly cultivated in Egypt. Similarly the so-called mummy wheat is the many-headed species now cultivated there.

No one who has dissected a seed, and examined the tissues of which the living germ is composed, can possibly believe that its vitality could be preserved, under any conditions, for thousands of years. But the limits of the life of many seeds have been definitely ascertained. For fifteen years a Committee of the British Association carried on a series of most careful experiments with a large number of seeds; the results were tabulated in their final report submitted to the Association in 1857 (Reports, p. 43). The limit varies greatly in different seeds. The length of a seed's life depends mainly on the natural protection it has against the physical conditions which surround it, especially the action of air and moisture. The longest lived seeds are those which are naturally sown in water, from the destroying operation of which they are protected by a specially hard protective covering. Perhaps the most authentic case of an old seed germinating is that of a Nelumbium water-lily. Forty years ago Robert Brown experimented with seeds which had come from Sir Hans Sloane to the British Museum, and had certainly been in the boxes in which he found them for a hundred and fifty years. Several of these seeds germinated. The covering of the grain of wheat is very different from that of the Nelumbium. The embryo is protected by a very thin covering which permits the evaporation of the fluids of the seed, so as to produce its death in a short time. Preserved

under the most favourable conditions, seeds of wheat fail to germinate three or four years after they have been harvested. This has been frequently tested, and is a fact that cannot be called in question.

But it is said that, considering the exceptional conditions under which the mummy wheat has been conserved, the vitality of some of the grains may have been retained. On the contrary, a further change has taken place in all seeds and fruits which come down to us in the coffins of ancient Egypt. They all appear as if they had come through the fire. The investing covering has not prevented the action of the oxygen of the air on the substance of the human body enclosed, nor on the seeds or fruits wrapped up with it. Not only has the embryo been dried up and killed, but the whole substance of the seed or fruit has been slowly oxidised, more or less burnt. The sinews and muscles of the dead body are hard and brittle, like the grains of wheat. It would be no greater wonder to see the hardened and eviscerated mummy, under favourable treatment, rise up and walk, than to see the grains found in its cerements germinate.

WILLIAM CARRUTHERS.

THE DESTRUCTION OF HAWKS AND OWLS.

IN the summer of this year I was sitting at the dinner-table in one of the health resorts in the north of England, when my neighbour remarked, "What I miss most here are those beautiful kestrels I used to see daily, hovering over the wooded glen in which the river flows." "Oh," I replied, "I can tell you where your kestrels are now: I saw them to-day, to the number of about a dozen, nailed by the head in the keeper's museum near the moor side." This conversation took place within a few miles, as the crow flies, of districts in Southern Scotland recently devastated by the plague of short-tailed field voles, when an area of hill pasture, not less than twenty miles in length and from ten to twenty in breadth, was rendered practically useless for grazing purposes.

The exhaustive Report, published in 1893, of the Commission appointed by the Board of Agriculture to investigate the circumstances, dwells specially on the services rendered by hawks and owls in mitigating the plague and assisting in clearing off the devastating rodents. The conclusions arrived at by the Committee were made known and commented upon by the press, and circulated through the length and breadth of the land; and it seems well-nigh incredible that, notwithstanding the evidence brought out in the report, the owners of shooting and game preserves, even in the immediate neighbourhood of the vole-ravaged districts, should continue to permit their keepers to

wage a war of extermination against the most useful friends and allies man has to assist him in ridding his fields and gardens of vermin.

In a Scotch local paper, in the spring of this year, there was a short paragraph to the effect that a game-keeper going to examine a trap set for hawks (probably one of the inhuman and cruel pole-traps) found a hawk taken, and, much to his surprise, saw that its mate had been feeding it; no fewer than the remains of twenty-two mice being discovered lying around it. It is further alleged that the keeper slew that hawk. It has been calculated that a single nest of kestrels will in three months clear the land in their beat of ten thousand rats and mice.

In 1893, in America, the Department of Agriculture issued a beautifully-illustrated volume for free distribution amongst their farm population, on *The Hawks and Owls of the United States.** In this work the statements set forth are based on the examination by scientific experts, of the contents of the stomachs of 2,700 hawks and owls, the result proving that, with very few exceptions, these rank amongst the best friends of man, and ought to be encouraged to abide near his home. But why multiply instances? The literature of the subject is immense, and the evidence is overwhelming as to the valuable services rendered to man by his feathered friends.

Far be it from us to inveigh against legitimate field sports, or the right of owners and occupiers to encourage a good head of game on their estates. May sport of the right sort long flourish in England, for it will be a sorry day when there is no game left to pursue. We must remember, however, that some things can be purchased too dearly, and that there are thousands of people—a vast majority we may say—who are not sportsmen and who claim to have no skill with a gun, who yet derive the greatest pleasure in marking the appearance and flight of wild birds; their delight is to watch the hovering kestrel soaring above the fields, or note in the gloaming the noiseless flight of the lynx-eyed owl. Why, we ask, are these sights to be denied us, and to the generation yet to come? Why is residence in the country to be rendered tame and uninteresting to the many from the absence of once familiar birds, now so rarely seen, and shortly to be known only through books? Hundreds amongst us are now asking these questions.

Great Britain is fast being despoiled of her treasures, of her shy, wild creatures in field and woodland, of all her most useful, hard-working servants and fellow-workers in man's interest, and this to satisfy the craze of high-stocked preservers, or to gratify the keeper's vanity so that he may be able to show a great head of game to his employers of the annual shootings, and a goodly number of poor harmless victims gibbeted on the gable of his outhouse.

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* [Noticed in NATURE NOTES, 1894, p. 13.]

It is a foolish and short-sighted policy, for even from the game preserver's and farmer's standpoint, hawks and owls are proved to be of the greatest service; the slight injury they occasionally inflict being far counterbalanced by the good they do. When we consider all the appeals already made for consideration, and all that has been written to enlighten those concerned, it seems, we admit, almost hopeless to convince game preservers that the extirpation of hawks and owls is a stupid and cruel crime. Yet we must not be discouraged, for it is only by continual reiteration we can hope to bring home the truth, and thus induce them to stay the destroying hand.

JOHN CORDEAUX.

ROOSTING HABITS OF CERTAIN BIRDS.

ON the night of January 11, I accidentally discovered a wren sleeping in the dilapidated remains of a thrush's nest. Since then this nest has been occupied nearly every night, either by one, two, or occasionally three of these little birds. The hard, cold, mud-plastered interior of a thrush's nest seems but a sorry substitute for a comfortable lining of soft feathers with which the king of birds furnishes his own nursery. Wrens, as is well known, often utilise their own nests as winter sleeping places; many of them crowding together in one nest for the sake of warmth. Not long ago I watched a company of these little birds turning in for the night: one after another they kept disappearing through the tiny and perfectly circular entrance-hole, till all were safely stowed away in the warm, dark interior. They do not, however, always make use of their nests for this purpose, but are often found sleeping in hay-stacks, in holes in thatch, and other suitable places. An instance is recorded in *The Zoologist* of April, 1886, of no less than ten wrens roosting regularly in a coco-nut shell suspended from a verandah, notwithstanding that this shell was already occupied by a growing plant. Whether these gatherings are family parties consisting exclusively of the parents with the young reared during the previous summer or otherwise, I do not know, but in either case there must every morning be a general dispersion, each bird going its own way on its daily foraging expedition, but all re-assembling in the evening when bedtime comes round. Wrens do not hunt (if the expression be allowed) in packs or families, like the long-tailed tit, and one seldom sees more than two together during the day—indeed, in autumn and winter the little bird is generally met with quite alone.

The thrush's nest mentioned above had been built in some ivy close under the eaves of a thatched summer-house—a build-

ing site which in former years had occasionally been made use of by wrens. Possibly, a pair may have had a nest close by last year which had by some means been destroyed after the young had been reared, and the family finding it gone, had, in its stead, adopted as a sleeping place the nearest nest they could find. I am not aware that the practice of making the nest serve as a *winter* dormitory is followed by any other British bird.

In spring and summer the female water-hen conducts her newly-hatched brood at dusk to the nest in which they were hatched; but to get a glimpse of the family settled for the night one has to emulate the noiseless tread of the red man, for at the slightest suspicion of danger they all instantly drop into the water, scuttle off among the reeds and sedges, and are seen no more. It seems marvellous how the funny little black chicks manage to clamber from the water up the steep sides of the nest, the top of which may be some six or eight inches above the surface.

Some birds have a habit of roosting in the same place night after night for a long time if undisturbed. At a certain spot under the eaves of the building in which I am writing, there sleeps every night a little blue tit, and he has done so, I believe, almost uninterruptedly for four years, in fact, ever since the place was built. I now and then take a light and go to see if he is there, and do not recollect ever once missing him from his accustomed place. Having been from home, however, sometimes for several weeks together, I cannot state positively that he never shifts his quarters. Unfortunately, I have neglected to ascertain particularly whether he continues to roost there throughout the nesting season. He sleeps very soundly, seldom waking up when a light is thrown upon him, and looking like a bunch of fluffy feathers. Another blue tit has for some months slept in a "tit-box" fixed up inside the porch of the same building, and barely two feet above the head of a person of middle height. Should there happen to be anyone standing in or near the porch when this important personage is about to retire for the night, he shows great displeasure and indignation—flying backwards and forwards among the shrubs close to the intruder, and expressing his feelings in what sounds like decidedly "strong language."

Sparrows sleep almost anywhere, provided they can find safety and shelter from the weather. Great numbers resort to old ivy-covered walls, and stacks of corn, hay, &c. On the 21st of last November I saw a cock-sparrow carrying a feather in his beak, and have noticed the same thing on other occasions out of the nesting season. It seems difficult to account for the habit, unless it be that the feathers are conveyed by the sparrows into their sleeping places under the tiles of houses and similar places. On the other hand, the propensity to pick up white or other conspicuously coloured feathers, may be somewhat akin to that which impels some birds, notably members of the crow family, to appropriate and hide bright glittering objects. Many

of the starlings' boxes here under the eaves of the house are occupied on winter nights by sparrows. Last summer and autumn a great many small birds, chiefly sparrows, had for a long time been in the habit of roosting among the leafy underwood of a plantation; but the severe gale of November 18th stripped off nearly all the remaining leaves, and left the place bare and shelterless. In the afternoon following there was a tremendous hub-bub in the plantation; the sparrows had assembled as usual for the night, but finding all shelter gone, were chirping and chattering away in a state of great consternation, and probably holding a consultation as to what was to be done.

Large beds of reeds and bulrushes are favourite sleeping places with many birds. Besides the usual reed dwellers, such as the sedge and reed warblers, black-headed bunting, &c., vast numbers of starlings, as well as of swallows, house martins and sand martins congregate and pass the night there. On fine evenings, as autumn comes on, the air above these "reedlands" sometimes seems almost thick with swallows and martins, reminding one of a cloud of gnats. They continue hawking for late-flying insects, and sporting with each other, till the approach of darkness obliges them to settle down among the reeds. A good many of these birds roosted last summer in a large and thick-growing sallow overhanging the river here. Happening to pass close by on the evening of August 2, I disturbed a small party of them, which flew out over the water a little way, returning to the tree almost directly I had passed. Though too dark to see the birds themselves as they sat closely packed on the lower branches, the reflection of many of them was clearly visible in the still water below, cutting sharply against that of the sky, so clearly, indeed, that the swallows could by their elongated tail-feathers be easily distinguished from the rest.

The pied wagtail is another bird which seeks the shelter of the reed beds at night. Assembling, sometimes in large numbers towards dusk, flocks of them are seen restlessly flitting from place to place over the reeds, till they finally drop down beneath the level of the waving plumes and are hidden from sight. I have also seen family parties of yellow wagtails approaching such places in the evening, and have little doubt that they also roost among the reeds.

A certain creek or inlet near the Suffolk coast, communicating with the river Alde, and much overgrown with reeds, used to be a favourite nightly *rendezvous* for starlings. Shortly before nightfall flock after flock kept arriving, till an enormous number had collected. The wonderful aerial evolutions they went through before finally settling for the night was a sight not easily forgotten. At times the flocks would combine, forming so vast a multitude as almost to darken the sky, and the mighty rush of their myriad wings as they swept overhead was like the

roar of a waterfall. Then again they would divide, each flock for a time performing separately.

In all the graceful and complicated manœuvres executed by these large flocks of starlings, what strikes one most is the wonderful unity of action, the precision with which every movement is accomplished. One dominant and irresistible will seems to pervade and direct the movements of a flock containing perhaps many thousand individuals.*. At one moment the flock at a distance will appear as a dense black mass; at the next, in the twinkling of an eye, it becomes almost invisible. In the first instance every bird has its back turned towards the spectator, presenting the greatest possible extent of surface; in the second all turn simultaneously edgeways, as it were, exposing the minimum amount of surface, and letting the light stream through between them. Suddenly there is a sort of flash, and the flock is black and impenetrable as before. After wheeling in graceful spiral curves, spreading out into long attenuated columns, splitting up into small detachments and again joining company, and going through endless changes of form, the whole army of starlings at last descends, and every bird seeks his place among the sheltering reeds.

There is something very noticeable and interesting in this exuberance of spirits, this supreme joyousness, expressed in various ways by many birds just at the close of day. On fine spring evenings, especially after rain, the thrushes and blackbirds sing most gloriously; they seem completely carried away by their feelings, and unable until long after sunset to bring their jubilant music to a close. But even after their tuneful voices are at last all hushed for the night, and it has grown almost too dark to distinguish the singer, there may even yet be heard that sweet fragment of bird music, the robin's evensong. Flying to the top of some hedge or wall, the little vocalist pours forth his short but melodious and impressive song, and then makes for his roosting place among the ivy on some old wall, or in some thick-growing box or holly.

The merry roving bands of linnets, after foraging abroad all day among stubbles and furze-covered commons, act in like manner. As the autumn sun sinks into the blue hazy horizon, and the whole landscape is for a few moments lit up by his parting glow, they all fly up into the nearest tree or hedge, wipe their beaks on a branch, and troll out a succession of quaint but musical notes, pitched far below those of the robin, and of a quality of tone differing from that of most other birds. Rooks, before settling for the night, sometimes express the exuberance of their feelings in a manner peculiar, I think, to themselves. After mounting to a great height in the air, they close their wings and fall headlong for some distance, suddenly arresting

* This is more or less observable with many other birds when congregated in large flocks, such as dunlins, golden plovers, various kinds of wild fowl, &c.

their descent in mid-air, and "tumbling" at times somewhat after the manner of a tumbler pigeon. They are light sleepers and easily disturbed by any unusual noise. When many rooks are roosting together, absolute silence is not maintained for long; an occasional drowsy half-suppressed caw may be heard at all hours of the night coming from some sleeper ill at ease, possessed perhaps of a hazy idea that all is not right and tight. Possibly, too, there may be dreamers among them given to talking in their sleep, for *homo sapiens* is by no means the only dreaming animal. Dogs are notorious dreamers, and I have heard a foal of only a few weeks old "whinny" softly in his sleep. Should anyone happen to approach the trees on which a company of rooks have settled themselves for the night, they keep perfectly still and quiet, sometimes allowing him to pass almost directly underneath them before retreating, hoping, no doubt, by this means to escape detection.

G. T. Rope.

Blaxhall, Suffolk.

THE NIGHTJAR.

As few people have the opportunity of studying the nightjar in its haunts, perhaps a few words from my own observations would not be unacceptable. I will not go into the details of its nesting habits, &c., as they are given in most books on birds; its peculiar habit of perching *along* instead of *across* a branch is a well-known fact. It has, too, at least three different cries, which is not generally mentioned in text books—namely, the ordinary "chur-r-r-r," uttered when perched, a single whistling note "hwitt," made when flying, and a kind of "chuck," made when two meet in the air. The favourite haunt of a nightjar is an open common, covered with gorse and fern, a few bushes scattered about, perhaps a few trees, though these do not seem essential to this bird. It appears to return to the same locality year after year.

Let me assume a bright afternoon and see whether one can be put up. During the day it lies very close, and will not rise until almost trodden on, for the bird seems intuitively to know that its plumage harmonises well with its surroundings. The particular place visited is an open part of some beautiful woods in Surrey, covered with heather and bracken, with few fir trees dotted about, some young birch trees on one side and a couple of stunted old oaks close by, the whole surrounded with pine and deciduous trees. Walking through the woods the *rendez-vous* is approached, the wood-lark is singing overhead, and the chiffchaffs and willow-wrens are chanting their monotonous notes close by. In previous rambles I have put up a nightjar

at the foot of a fir tree, and I make straight for that spot again, but to-day a blank is drawn, so wandering about, carefully noticing any dead piece of bough that may be lying on the ground, which our quarry so closely resembles, after loitering about a bird flies up from under a fir tree, but it is only a chiff-chaff that has been startled out of its cosy warm nest under the fir needles, in the former of which there are three eggs. Examining this beautiful structure and then moving on, a nightjar's feather is seen lying on the ground, by which I know they are not far off. The oak trees are then reached, and from near the base up rises, with slow and quiet flight, the object of my quest. A cock bird this turns out to be, and it at once makes for the bough of a tree, uttering its "chur-r-r-r" for a second, when settled, as if complaining of being disturbed. It does not seem at all dazed by the light as one would think, as its eyes are chiefly adapted for seeing in the dark. Three yards farther on, and from beneath the shade of the other oak, the hen starts up, leaving exposed her two beautiful marbled eggs, laying on a few pieces of dead bracken intermingled with one or two twigs, a mere apology for a nest. (I may here add in parenthesis that the eggs have been found in June, and as late as August, but the particular date of my visit was July 12.) After admiring the eggs I move away, leaving the bird to return and cover them up again, which she will soon do.

Now I go on another occasion, and this time it is on a quiet moonlight evening. Twilight is fading, and I steal to its haunt as quietly as possible, my footsteps deadened by moss and heather, for at this time the birds rise up on the least disturbance; but it is a little too late, for already that fascinating "chur-r-r" is heard from a tree close by, so I stand still and watch. A soft whistle from above, and then I know the bird is on the move, and it is flying around the trees, now and then flapping its wings amongst the branches, supposed to be for the purpose of disturbing any insects that may be resting there. Here it comes, with slow beat of wings, now and then turning quickly aside to catch a passing insect, or almost stopping in the air; now it is close overhead, and I can distinguish the clear white underparts. Here comes its mate to join it in its nocturnal hunt; then one bird settles again, and that thrilling note is apparent, so piercing in the quiet evening air. After watching them for a time that is far too short, I reluctantly retrace my steps, and as I return through the woods, I can still hear them for some distance, so penetrating and yet so soft is their peculiar note. There are others flying near.

Any lover of Nature who is able to go and watch and listen to this somewhat *rara avis* will not easily forget the experience. I have had four or five birds flying round me at once, and almost within reach of my hand. Their flight is so slow and graceful, and yet they have such command of their wings as to be able to turn sharply round, and sometimes seem to float in the air. The

earliest date I have seen them is May 13, and the latest about August 15, and a jaunt on a lovely evening at any time between these periods, provided, of course, that the birds are *en evidence*, cannot fail to be a source of satisfaction and pleasure to the fancier of this lovely but peculiar genus of the feathered world.

Croydon. G. F. Ely.

SHORT NOTICES OF BOOKS.

A Handbook of the Birds of Great Britain, by R. Bowdler Sharpe, LL.D., vol. i., pp. xix., 342, 31 coloured plates. 8vo. London: W. H. Allen and Co., 1894. The old familiar "Naturalists' Library" is to be succeeded by "Allen's Naturalists' Library." Sir William Jardine, one of the most eminent ornithologists of his day, edited the old library, and the proprietors did not allow the reputation of the new series to lose anything when they secured the services of Dr. R. Bowdler Sharpe, of the British Museum, for editor-in-chief. The first of the four volumes (comprising the Passeriformes) on British birds, written by the editor, has reached us. It is a handy-book indeed, with a vast amount of information in a small space. The young student may be sure of finding the information accurate and fully up to date, and though the professed British ornithologist may at first be inclined to grudge the space on his loaded shelves for another text-book on the subject, he will be none the more able to dispense with the valuable information it contains. In a short preface the author reviews the principal modern literature of the subject, and deals with that bugbear nomenclature. A useful systematic index precedes the body of the work, which is itself exceedingly methodical, and will in this respect commend itself especially to the young ornithologist, who will not have to burrow for the particular information he requires. One of the first books the present writer possessed, and one to which he now turns with pleasure and profit, was Newman's edition of Montague's *Ornithological Dictionary*, and he was often troubled by the unequal treatment of the species (perhaps unavoidable then), and the frequent absence of just what he wanted to find. The plan of the *Handbook* is to give a short diagnosis of the orders, families, sub-families and genera into which birds have been divided, together with the geographical distribution of the species comprised in them, and to discuss each species under the headings of description of the plumage, range in and outside the British Islands, habits, nests and eggs. The descriptions of the dress worn by the sexes at different ages is accompanied by some most valuable "distinction marks," and distinctions between assimilated species are pointed out; and in the account of the ranges we have a notice of allied forms. Some necessary synonyms are given. They are especially necessary in this book because Dr. Sharpe holds strong views on nomenclature, and while employing such names as he believes will ultimately be found to be correct, has at the same time used some which look very strange to those familiar with the previous works on the subject. For instance, the bird man who in his youth knew the long-tailed tit as *Parus caudatus* and avoiding *Mecistura longicaudata* followed it to *Acridula rosea*, now finds it figuring under *Ægithalus vagans!* And we find that the wren is no more to be a *Troglodytes*, but an *Anothura!* Dr. Sharpe is, moreover, an advocate of the "Scomber-scomber" principle, and we have *Merula merula*, *Corone corone*, &c., &c. Doubtless he is right, and that it is "better to face these changes fairly and squarely, and by their adoption, if they are found to be correct, to introduce an uniform system of nomenclature on both sides of the globe." If such a thing be possible, then "speed the time!" But it seems to us that even then we should have no guarantee that the names as settled should remain unchanged in future.

The chromolithographic plates (three of eggs) are those of the old library with the exception of five prepared by Mr. Keulemans, which, far in advance of the others and useful as they are, would have been more so had the reproduction

of the colouring been more successful. But it will be a boon to young and mature naturalist alike to get in this excellent handbook—at once readable and accurate—so much good work for so little money.

O. V. A.

Literæ Humaniores: An Appeal to Teachers, by H. S. Salt (London: William Reeves, 1894, pp. 32). This is an appeal to teachers to teach humanity (as understood by the Humanitarian League) to animals. An idea of the kind of statements and arguments this pamphlet contains may be gained from a perusal of p. 6, line 19, p. 10, and p. 14, line 11 *et seq.* We are afraid that, however good the intention of the author may be, such statements as "collecting and dissecting may easily become identical and interchangeable terms," and "unbridled mania for collecting breeds a positive love of slaughter for slaughter's sake;" such expressions as "blood-sports," "amateur butchery," "a horde of young savages," "youthful marauders and murderers," &c., are rather calculated to disgust many of the best friends of the Selborne Society's cause. Many people will be a little surprised at the conclusion arrived at by Mr. Salt in his remarks upon petting animals. And some of us may think that the League had better turn its attention to the condition of those animals which supply London with the milk which is so important an item in the diet recommended in lieu of "flesh food," before they try to reform the Zoological Gardens.

If our present system of dealing with the rabbit is wrong, we must, if we give it up, either exterminate the breed or let the rabbits eat up the food of the vegetarians. It is a question whether the example set by nature, in ordaining the hawk and the stoat, &c., will ever be lost sight of, or the fact that man has been a hunting and flesh-eating animal from the earliest days be forgotten. To be truly humane we must not forget our own species, captive in great cities, and longing to hear the voices of the singing-birds; but rather be glad that the happy nature of birds renders it possible for this desire to be satisfied. Are the members of the Humanitarian League truly consistent? We wonder if they wear woollen clothing! Some faddist might argue that the poor sheep would be happier if they were allowed to wear such wool as nature permitted to grow on their backs, than as they are now—liable to be suddenly shaved in the spring at our pleasure!

O. V. A.

Science Notes for Unscientific Readers, by Henry Grey (Colstar, Edinburgh). We have read the first chapter of this wonderful little book, and no more. We think we can show that it would have been unwise to have prosecuted our researches any further. The first chapter is upon "Astronomy," and consists of five pages. Within this short compass there are many astounding statements. At the very outset we are told that astronomy has been "utilised from the earliest ages for the discovery of previously unknown countries by sailors and explorers." This is mysterious, and we should be glad to be told in what way the study of the stars assisted in the discovery of unknown countries. In the second page we are informed that "from the south side of the Equator the sun appears to rotate from west to east instead of from east to west." We could hardly believe in such ignorance of the most elementary facts on the part of anyone attempting to instruct others upon the phenomena of astronomy. But in the next few lines we have some information given us about the moon, which "revolves round the earth in an irregular plane," while "the changes in its apparent shapes" (we suppose the author means "*shape*") "occur from its face being sometimes only partially turned towards the earth." Of course every schoolboy who has the least smattering of knowledge on the subject, knows that the same side of the moon is always turned towards the earth, and that the phases of the moon's light depend upon the portion of the disc lit up by the sun's rays and visible to the earth. The next clause is astronomically correct, but grammatically curious, for we are informed that "at new moon *its* course is between the sun and the earth, while at full moon *she* is on its opposite side." A little lower down on the same page we learn concerning the Asteroids that "*most* of them are too small to be seen without a telescope," whereas *all* of them are so. Meteors in the same page are said to "shine singly or in luminous masses like stars." "Shining singly" is at least a curious description of a shooting star, which we presume is meant. The

next page soars into high arithmetic, and, it having been previously stated that the earth is ninety-two millons of miles from the sun, we are told that the nearest fixed star is "calculated to be 500,000 times the distance of the earth from the sun." It is generally held that the nearest fixed star is about twenty millons of millions of miles from our sun, but this would be only about 220,000 times the distance of the earth from the sun. Finally we are told that the Polar Star is "seen directly overhead at midnight," which of course it never is.

There is one sentence in this brief preface with which we cordially agree—namely, that "a little learning is a dangerous thing." Nevertheless, we do not think a good deal of ignorance is in anywise safer.

W. W. H.

By Vocal Woods and Waters: Studies from Nature by Edward Step (Bliss, Sands and Foster, 5s, 8vo, pp. 254). This volume is made up of papers which have appeared in various popular magazines, and we are inclined to think that such collections are in danger of being overdone. The tendency nowadays is that literary work shall "contrive a double debt to pay," and the author, having obtained remuneration for his wares in one form, proceeds to render them lucrative in another. Perhaps the writers of verse are the most hardened offenders in this respect; one feels that their muse is unduly stimulated by the anxiety to produce sufficient for a volume. But essayists are almost as bad, and many of them act in this way with far less excuse than Mr. Step, who has brought together a sufficiently pleasant "sheaf of gathered leaves," and whose volume is rendered attractive by the presence of numerous good illustrations. But while many of these are instinct with the feeling of "out-of-doors," others—that on "vegetable monsters," for example—are of the kind which can be produced *ad infinitum* by any one who has access to an ordinary reference library, and these are certainly *not* worth reprinting. "Radicle leaves" (p. 70) should be "radical"; "Dr. Beyne" (p. 179) should be "Breyne"; and "Dr. Seeman" (p. 185) spelt his name "Seemann."

Canon Bell, whose *Poems New and Old* we noticed some time since, sends us another volume—*Diana's Looking Glass and other Poems* (Edward Arnold). The fertility of these poets is astonishing, but one is tempted to think that if more of them emulated the reticence of Mr. Robert Bridges, they would be more likely to achieve lasting results. "Sweet and wholesome" was the judgment passed by a reviewer on Canon Bell's previous volume, and the same phrase aptly applies to this. There are some pleasant lines "To the Thrush," and many little touches throughout the book reveal the lover of Nature. "Confession" is a poem after—a long way after—D. G. Rossetti's "Last Confession"; and other poems suggest that the author has read a great deal of verse, and has been influenced by it more than he knows.

The Animal World volume for 1894 (Partridge, 2s. 6d.) bright in blue and gold, is full of excellent pictures and delightful reading, and no doubt formed a charming Christmas-box for many young folk. Prose and verse are judiciously mingled—we note, by the way, that Mr. Norman Gale's verses given on page 123 have no author's name appended— and matters connected with the work of the R.S.P.C.A. find due place. We cannot help expressing our strong disapproval of such stories as "Rescued," written by a lady. The description of barbarities of this kind is productive of no good, even if the statements be accurate, which we do not believe to be the case. The R.S.P.C.A. has done and is doing excellent work, and the *Animal World* is an excellent publication; but the cause which they advocate will be hindered rather than helped by advocacy of this kind.

The December number of *A Beautiful World* (Bale and Sons, 6d.) contains a full report of the proceedings at the Annual Meeting of the Society for Checking the Abuses of Public Advertising, with an appeal to members and other useful information.

Mr. E. Sandford's *Manual of Exotic Ferns and Selaginellas* (Elliot Stock, 3s. 6d.) is a more distinctly technical work than those which are usually recommended in these columns, containing as it does the scientific descriptions of over a thousand species and varieties, arranged alphabetically under the genera

which are enumerated in the same manner. The result is a book neither popular nor scientific, but which may be assumed to have been found useful, inasmuch as this is a second (and cheaper) edition. The introduction deals with fern cultivation from a practical point of view. There are more misprints than can be pardoned in a second issue, and it is to be regretted that the sheets were not submitted to a botanist before being sent to press. The "authorities for the generic names" should have been given more accurately and adequately, or omitted altogether.

The Country Month by Month for December (Bliss, Sands and Foster) deals largely, as is to be expected, with Christmas evergreens, but Prof. Boulger has spared us a repetition of the more or less inaccurate traditions associated with the subject. The curious carol copied from the Harleian MSS. is an old favourite, but one which bears repeating, and before we have time to tire of the evergreens we find ourselves among the mosses, of which we have enough to interest and nothing to be unlearnt afterwards—one of the best features of this pleasant series of books. Mrs. Visger is, as usual, at home among the birds.

SELBORNIANA.

Feeding the Birds.—During several winters we have fed the birds on nuts, seeds, suet, &c., suspended from canes fixed across a sitting-room window and within eleven inches of the glass. Our visitors, principally tits-major, blue, marsh, and cole—were very numerous; at one time we had two pairs of major, three of blue, two of marsh, and one of cole, seven greenfinches, one cock chaffinch, and an occasional nuthatch, wren, robin, and blackbird. At the present time only one pair of blue tits, one of cole, and the chaffinch come. Wishing that some of our friends would nest close by, I, last year, fastened a small deal box, in which I had drilled two holes for entrances, on to the wire arch that goes round this same window, and well within view of people in the room. This plain structure was too unlike the real thing, so early this spring I tied firmly round it some rough pieces of fir bark, and we have been rewarded by the blue tits building there, and just now, every day and all day long, a supply of food—flies, caterpillars, &c.—is being brought by both parents to the brood. Whilst building I could not discover that Mr. Tom-tit did any of the work; he would sit on the canes and eat and scold, whilst his mate would come with her beak full of building material—hairs, moss, &c. Will any of your readers tell me if this is their usual way of working? Another question I should feel grateful to have answered is, is it by sight or smell that birds find their food? The cole tits, who would eat all the different sorts of food during the winter, only come now if fat is provided. For days together I have sometimes omitted this, but *always*, within a very short time of its being put on the canes, they have found it out and are busy making a hearty meal.

Alresford, Hants. M. J. EAMES.

Highgate Wood.—The following amusing letter appeared in the *Standard* of March 14 last, and has been waiting insertion in NATURE NOTES ever since:—"In August, 1886, Highgate Wood became the property of the Mayor and Commonalty and Citizens of the City of London. It was then in a very sad state. So thickly was it overgrown with brushwood, that if you stood in the centre you could not see the linen of the inhabitants of Archway Road hanging to dry in their back gardens. Nor could you see the advertisement of Juggins's stout and porter which surmounts the front of the public-house at the south corner of the wood. Therefore, the Mayor, and Commonalty, and Citizens cut down the intervening brushwood, and now when we stand in the centre we can divide our attention between Juggins's porter and our neighbour's washing. Scarlet flannel petticoats are much worn in Archway Road; and if anyone desires to feast his eyes on these very bright and picturesque objects, so seldom seen in the streets, let him repair to the centre of Highgate Wood.

"Still we were not happy. The wood is bounded on the north by the railway

to Muswell Hill, and it was a common subject of complaint in Highgate that we could not see the railway from the wood without going quite to the edge. At length, however, the Mayor, and Commonalty, and Citizens have begun to fell the trees on the north, so that people in the centre of the wood will soon be able to look at the railway when they are tired of the porter and the petticoats. But there are a number of new red-brick houses on the east side of the wood, and I regret to say that I observe no clearing of timber in that direction. Surely, Sir, a man who stands in the centre of the wood, and knows that there are new red-brick houses to the east of him, will not be happy unless he sees them.

"Sir, it is Spring: birds are pairing, and the County Council has begun to carve the mud-pie which it made last year at the bottom of Waterlow Park. I do not know how to address the Mayor and Commonalty; but the Citizens of the City of London all read *The Standard*, and surely they will respond to my appeal and will not continue to screen from my yearning gaze any one of those objects of interest which one naturally desires to see when one goes to the centre of a wood."

A. E. H.

Protection of Birds.—The County Council of Cornwall have set an example to other counties in showing a regard for our feathered friends. The *London Gazette* of December 11, states that the Home Secretary has made an order under Section 2 of the Wild Birds Protection Act, 1894, upon the application of the County Council of Cornwall, prohibiting the taking or destroying of the eggs of the Cornish chough in any part of the county. Will other counties go and do likewise in respect to their local *fauna?*—*Graphic.*

NATURAL HISTORY NOTES AND QUERIES.

A Cuckoo Note.—On p. 225 of your last number (vol. v., Dec., 1894), your contributor, Mr. W. J. C. Miller, in his interesting paper on "A Bird-Loved Suburb," refers incidentally to a question concerning the newly-hatched cuckoo, which has, I believe, never been satisfactorily answered. He mentions the young cuckoo's "sad behaviour towards its nest-mates."

The question, as I understand it, is this:—The famous—or, as some would say, the infamous—Dr. Jenner obtained his distinction of F.R.S. by a paper on the "Natural History of the Cuckoo," which can be read in the *Philosophical Transactions* for 1788. In this paper he not only gives details of his having observed the young cuckoo eject its fellow nestlings, but he declares that the bird is designedly formed with a broad and hollow back, so as to enable it to accomplish these evictions. Some forty years later, the eminent naturalist Waterton denounced the notion as an absurd one; and Dr. Norman Moore, in the *Dictionary of Natural Biography*, roundly accuses Jenner of having declared that he had repeatedly witnessed what could never have been seen at all. Nevertheless, it is almost universally believed that the young cuckoo does eject its comrades from the nest; and it would be interesting and useful if, in the coming season, your readers would carefully watch nests in which a cuckoo's egg has been deposited, and would report to you what they observe. My own impression is that neither Waterton nor Dr. Moore has done Jenner justice. That the bird is specially fashioned so as to facilitate this operation is, I believe, quite a delusion. Certainly no anatomist has, by a series of dissections, at various ages, proved that the young cuckoo has this temporary peculiarity in its formation; and, until some scientific proof is forthcoming, the idea may be dismissed as chimerical. But anyone who has watched young thrushes in the nest must have noticed how, for the purpose of relieving nature, they violently thrust the rump backwards and upwards until it overhangs the nest's edge, and in this way one young bird might very easily be overbalanced by another, and fall from the nest. This, I believe, is exactly what happens in the case of the young cuckoo,

which soon grows to be the heaviest of the nestlings, and if that be so, there is no reason for regarding its action as a kind of "special providence."

ARTHUR W. HUTTON.

Blackbirds defending their Nest.—Early in May, having noticed a pair of blackbirds slipping in and out of a thick lime tree not a dozen yards from the house, I was in hopes they were building there, but one morning I was awoke by such a continual screaming and chattering that I began to doubt the desirability of such neighbours quite so near. However, on looking out, I found there was good cause for the disturbance. Our large Persian cat was sitting in the middle of the tree (near, as I afterwards discovered, to a nest), and the two birds were flitting backwards and forwards close to her, sometimes hitting her head with their wings and scolding with all their might. This lasted more than half-an-hour, and now and then the poor things seemed quite worn out and hopeless, but after a few minutes they would begin the attack again with renewed vigour, the cat all the time pretending to take no notice of them. When finally we went out and enticed the cat down, the cock was bold enough to remain in the tree, and hopped about in a triumphant sort of way. I as soon as possible fixed a crinoline of coarse wire netting round the top of the tree trunk, so I trust the nests will be safe from cats in future. During the cold wet weather at the end of the month the birds seemed to have deserted the tree, but they are back again now, and a second hen has also appeared on the scene.

Hampstead. E. K. H.

"Zulu" the Parrot.—While staying a short time ago at the house of some friends in Bristol, I was much struck with the great tameness of a young grey parrot which one of the members of the family had recently brought home from South Africa. When purchased, Zulu (for that was his name) was but a few weeks old, and scarcely fledged, at which time he kept up, I was told, an incessant "squauking," which is said to be the habit of young parrots, but when his voice "broke" he soon began to develop his imitative faculty, and at the time I saw him, when he would have been, I suppose, about seven months old, he was just beginning to talk. He seemed to find a difficulty, like most children when learning to talk do with regard to the letter "s," in producing the hissing sound of the "z" in his own name, but he would say "Ulu" quite distinctly. But the most remarkable thing about Zulu was his wonderful tameness and docility. A young lady of the household who usually attended to his wants could do almost anything she liked with him. When she wished him to return to his cage after his morning's fly round the room, there was no "enticing" necessary, for she would take him up in her hands, clasping him round the body as she might have done any kitten, and carry him back to the door of his house. She would often take him upstairs, perched upon her shoulder, and he would quietly stand on the rail of the bed while the bed was being made. When on her shoulder he would often take hold of her ear in a playful way, or peck at her teeth, or pull the hairpins from her hair, &c., &c. She would put her finger into his mouth without the slightest hesitation. A stranger, however, who one day put his finger through the bars of the cage, received a rather sharp pinch. When let out of the cage anything bright or glistening, such as a thimble or pen, seemed at once to attract the attention of Zulu. A thimble was shown me with a hole right through the side of it—the work of Zulu—showing the power and strength of beak he then possessed, had he only a wish to display it upon the ear or finger of his attendant. One day he got upon the back of a pet pug dog, and another time walked over the cat while she lay stretched upon the floor asleep. One evening, after his flight round the room, he settled down upon my shoulder, though I was a comparative stranger to him.

A cotton reel was hung by a string to one of the wires of his cage, and to this he would cling and swing head downwards. Sometimes he would lie on his back at the bottom of the cage and claw and bite at the reel just as a young kitten might do, and if he could succeed in detaching it from the string he appeared greatly delighted, and would carry it up to his perch in triumph, grasping it round with his hand-like foot, while endeavouring to pick it to pieces with his beak.

There was one thing that Zulu did not like at all, though intended for his good, and that was the insect powder bath, the powder being blown upon him from a little machine made for the purpose. When he saw this coming he would at once retire to the farthest corner of his perch. His diet consisted chiefly of dry mixed seed and Indian corn. Sunflower seed he seemed to enjoy as much as anything. Fruit he cared but little for, and bread and milk, often given to parrots, he was not allowed. Nor was he allowed water in his cage, but only by the spoonful, with the hand occasionally, an authority on parrots having stated that the reason why so many die is because they are supplied with too much water and moist food. Though this theory seems a rather unnatural one, yet if it is the correct one, it would, perhaps, in the interest of the parrots which are now imported to this country in so large a number, be desirable that it should be more widely known.

I have never cared much myself about keeping birds in a cage, but, as far as it was possible to judge, Zulu, at any rate, did not appear to suffer much by his imprisonment, for a more lively and playful parrot, as well as a more docile and intelligent one, I should think it would have been difficult to find.

Caerleon, Monmouth. C. E. C.

Swallows and Insects.—A Welsh farmer and shepherd with whom I conversed last month propounded the theory that swallows and other migratory birds carry insects under their wings for the purpose of food during their flight. He had caught several preparatory to flying, and had always found a store of a kind of tick under their wings, apparently at no other time of year. Are these birds the victims of parasites, or can it be, as he suggests, that they provide themselves with food for the journey? If parasites, why do they not peck them out with their beaks, and keep themselves free from them? and why are they only to be found on them in the autumn?

Birmingham. A. M. Dixon.

Late Singing of Blackbirds &c. (p. 216).—On my way to 8 o'clock service, Sunday, November 4, I saw and heard a thrush singing beautifully, evidently enjoying the sunny, warm morning. The air seemed full of song from many birds besides the robins.

Great Malvern. M. S. Peacock.

Peafowls.—Is the following an unusual occurrence? We have several peafowls, and two years ago one of the hens made a nest and hatched five chicks, three of which were white and two brown (I may add all our peafowls are of the usual colour). One white and one brown bird died, but the others are still living, the brown one having grown into an ordinary hen like her mother. The others remained white for some months, and then gradually changed; dark feathers began to appear, and in time they became almost black, with a few white feathers scattered about. They are now fine young cocks, and are beginning to grow their tails, which seem to be like the old cock's. They resemble him in every way but the wings, which instead of being speckled when closed, are *black*, with a greenish-blue hue on the edges of the feathers. We have kept peafowls for many years, but have never had any like these before.

R. C. C.

Tortoise.—May I ask anyone who knows to advise me how best to take care of our tortoise? He is in our garden, where he wanders at his own sweet will. Does he want special food? I intend to take him into the greenhouse for the winter, unless I am advised that it would be better to leave him to bury himself in the garden to hibernate, as I believe tortoises will take care of themselves in this way. Ought he to be put in a bath of water sometimes?

Great Malvern. Mary S. Peacock.

Woodpigeons in Paris.—The references made in Nature Notes to the woodpigeons which have patronised several of the London parks for twelve or fifteen years past, induces me to inform you that on May 16 I saw six of these wild pigeons feeding quietly in the gardens of the Tuilleries, while the active life of Paris flowed unnoticed beside them. I afterwards saw some in the

trees, and many more may have been in the neighbouring Champs Elysées. It would be interesting to know how many years such birds have been seen in Paris. If longer than they have been in St. James' Park, where I first saw them, we may be indebted to French emigrants for the pleasure we receive from their company, but if, as I think is the case, they appeared in Paris later than they did here, then it would seem as if the Paris birds were either emigrants from London, or that the wild pigeons, having discovered there was safety in a multitude of human beings, communicated the fact to their friends.

H. B. HYDE.

An Interesting Pig.—I enclose a little account of a peculiarly interesting little pig, whose intelligence and adaptability as a household companion make one wish he was not destined to the fate of all pigs! He was one of nine: the mother had only eight teats, and every pig from their birth keeps to the one he commences with; the little ninth was therefore unprovided. The owner was a humane man, and it pained him to see it starve; after a little thought he procured a milch goat, and the two agreed directly to be mother and child on the most affectionate terms, running about together and evidently enjoying their position. Sometimes, however, the goat did not lie down to be suckled, and the man to whom the pair belonged placed his hand at those times so as to enable piggy to put his fore paws on it, and so reach his adopted mother's breast, which enabled him to vanquish the difficulty. At other times piggy would run into the master's cottage and there romp to his heart's content with a little dog, playing at hide and seek with it, and after a mock fight they would roll over and over together on the floor, and were the greatest of friends. This took place in the sight of my daughter, Madame Tommasi, when she was last at Cortona, where she has some property overlooking the Lake of Thrasimene.

Florence. J. BALDELLI.

A Tern at Hampstead.—A very beautiful tern was brought me on November 7; so tame had it become from want of food, that it actually alighted close by the side of a man while he was digging for worms, near to the Highgate Pond, and not far from Parliament Hill, and commenced to peck up the worms as the man was digging them up, and suffered itself to be taken up in his hand. He thought that by bringing it to me its life might be spared, but it had gone too long without food and gradually sank, and was dead before I arrived home. I have no doubt that this was its first resting-place after having been blown out of its course by the sea-side by the recent heavy gales.

JAMES E. WHITING.

Badgers raiding Wasps.—The following note appears in the *Newcastle Chronicle* of October 30:—"On Kingwood Farm, near Staward Pele, there is quite a colony of badgers, which evidently have a great predilection for wasps' nests. It has been noticed that several nests have been raided, and, from the feet marks, there is no doubt that the badgers have been waging successful war on these terrors to nervous folk." Is this an unusual instance? Hamilton Smith (*Naturalists' Library*, vol. xiii.), describes the common badger as "coming forth only in the night to feed on fruit and animal substances." Goldsmith (*Animated Nature*), says; "The badger, like the fox, is a carnivorous animal, and nothing that has life can come amiss to it," but the editor adds in a footnote. "The badger's principal food is roots, fruits, snails and worms. It seems quite a mistake, their living on animal food." W.

A Late Swallow.—On November 19, when we were walking along the East Cliff, we noticed a swallow flying about. It did not fly far out to sea, but kept fairly close to shore. Is it not rather late for the swallows to be still in England?

Bournemouth. A. M. GREENWOOD.

Strange Behaviour of a Robin.—A new milestone was being put up in our village in Buckinghamshire, and the man who was painting it had a red handkerchief. A robin was seen hovering near, and at last it came up to the man, who was talking to our gardener, and tried to peck at the handkerchief. The robin

allowed our gardener to stroke it, and did not seem at all frightened, and shortly afterwards flew on to the wall and sang. What was the attraction?

Bournemouth. A. M. GREENWOOD.

Food of the Wren.—A little brown wren has lately been in the habit of visiting a water butt just outside my window. The butt is quite full, and the wren comes to feed on the minute inhabitants of the stagnant rain water. He hops briskly round the brim, gripping it firmly with his strong toes, and every now and then reaching forward as far as he can to take his prey from the surface. Sometimes he alights on some osier twigs in the water and "fishes" from them. As the water butt is within one yard of the window it is easy, by keeping perfectly still, to watch every movement of the active little bird. When first seen I supposed him to be searching for the larvæ of gnats, but on examining the water none were to be found. Wrens, I believe procure a good deal of their food from the water, and are fond of haunting the bushes, sedges, &c., growing beside ditches and ponds. Here they are often met with by the sportsman in search of waterhens or snipe, whose dog, especially if young and inexperienced, cannot always resist their apparently attractive scent, but is apt to stand and point this tiny game. I once saw a wren busily engaged with some large, dark-looking object at the margin of a pond. Holding it in his beak, he kept dashing it against the nearest sticks and bushes with great vigour. On my approach he dropped his prize, which proved to be a caddis worm's case or house, made principally of oak leaves. Notwithstanding his violent efforts, he had not succeeded, at the time he was disturbed, in extracting the occupant.

Blaxhall, Suffolk. G. T. ROPE.

TO CORRESPONDENTS.

C. E. C.—The mycelium of a fungus. You will find an account of such luminosity in Cooke's *Fungi*, chap. v. (International Science Series).

E. A. D.—We fear there is no satisfactory method.

We must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

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LONDON TREES AND GARDENS.

By the Editor.

IT is with much satisfaction that we are able to record the successful result of our remarks upon this subject (*N.N.*, 1894, p. 142). The Metropolitan Public Gardens Association, as might have been expected, was prompt to act, and two healthy trees soon replaced the dead ones in "Flat Iron Square." The St. George's Vestry, as our notes on pp. 194, 215, showed, was for some time unwilling to move, and the original obstructor (who was also chairman of the Tree Committee) expressed his indignation at what he was pleased to call the "exaggerated statements" which we had made. His name is not among the members of the new Vestry, and already living trees have taken the place of the dead ones, and the larger planes have been surrounded with wire netting, the iron tree-guards having disappeared. The neglect which many of the trees have suffered can hardly be remedied, but if they are properly attended to they may yet in many cases become fairly ornamental.

We commend the action of the St. George's folk, tardy though it be, to the Fulham Vestry. We read in *London* of December 27, that "two residents sent rather smart letters to the Vestry complaining of the 'complete spoliation and destruction being carried on to the trees in King's Road and Parson's Green.' It was suggested to take no notice of the letters, and they were allowed to lie on the table." If these representations were reasonable, we trust that the "two residents" will persevere in their complaint, and enlist the sympathies of the press on their side. The action of the Vestry seems scarcely courteous, and suggests that there was some ground for the

complaint. Prompt action in such cases is extremely important, for the damage once done cannot be remedied.

West Square, to which we referred (p. 143), is in private hands; so far nothing has been done, nor has our private letter received the courtesy of an acknowledgment. As every householder in the Square pays 13s. annually for keeping it up, it is only reasonable that something should be done to replace the trees which are dead or dying, and to make some return for the amount paid.

We have held over an article by an expert on the state of the Embankment Gardens, to which we also called attention, in the hope that the London County Council may take the matter in hand before the time for planting summer flowers arrives. There can be no difficulty in providing at small cost an efficient border display both of annuals and perennials, in addition to the "bedding-out," and it is to be hoped that some member of the Parks Committee—whether "Moderate" or "Progressive" matters nothing—will make it his business to see that this is done. We shall be glad if at the same time something can be done to beautify such small pieces of ground as that at the foot of Blackfriars Bridge, on the Surrey side, now occupied by a dreary array of stunted shrubs; this is under the control of the City, not of the Council.

Mr. Sidney Webb has lately pointed out with pardonable pride the excellent work done by the London County Council in providing open spaces. Our attention has, however, been called to the fact that the Council failed to secure a space in Whitechapel, where such an opening is urgently required, and that the ground in question has already been partly built over; and it has been suggested that a protest against this neglect might fitly appear in NATURE NOTES. The record of the Council in matters of this kind is so good that in the absence of a complete knowledge of the facts we can hardly take this step; but we are making enquiries, and shall probably return to the subject.

We cannot too strongly impress upon Selbornians the importance of taking an active interest in everything which tends to the beautifying of our towns and cities by the introduction and protection of trees and gardens. It is not sufficient to secure an open space: that is only the first step; the next is to utilise it. As an example of how not to do it, we may take what has been done at High Wycombe.

Twenty-five years ago there was in one of the principal thoroughfares a flat-iron-shaped island of garden. We are not quite sure whether it was a private garden, or whether it belonged to the town and was hired, but we remember being taken into it one tulip-time, and feasting our eyes on the quaint and stately and various-coloured blossoms. From that time we date our love of tulips. The owner of the tulips and the tulips themselves have gone; so has the garden. In its place is a paved, raised place, bordered at intervals by big, heavy, ugly boxes, like giant tea-chests, each containing the remains of a tree,

mostly dead; between these are a series of large green candlesticks, each holding a tall white candle-like object!—the whole made in some kind of metallic composition, if memory serves us; these seem to have been intended for use as gas-lamps, but have never been so employed. In the middle is a basin of dirty stagnant water, with a fountain which does not work. The old tulip-garden is now not only an open space—it always was that—but public property. One wonders whether the Wycombe folk admire the change!

BIRD SANCTUARIES IN THE LONDON PARKS.

THE steady influx of the rural population into our large cities—more especially into London—during the last quarter of a century, appears to have been followed by a corresponding action on the part of the feathered tribes. Country folk, whose visits to London are few and far between, picture it in their minds as an aggregate of bricks and mortar, to be tolerated for a brief season only in consideration of its shops and round of amusements; and receive with polite incredulity any explanations to the contrary. Even Richard Jefferies remarked, when he came to reside for a while some twelve miles from town, that his preconceived views on the subject were quite overthrown by the presence of as much bird life as he had been accustomed to in distant fields and woods.

One of the most interesting facts in ornithological history of recent times is the permanent location in our midst of the wood-pigeon, once deemed the shyest of its race. Another remarkable event is the appearance up the river of the sea-gulls in large flocks, foretelling hard weather; years ago they were only seen at long intervals, and then in but small numbers. To various reasons may these congratulatory incidents be ascribed. In regard to the gulls, and the observation of kingfishers in the suburban districts of late, we doubtless have to thank the Thames Conservancy for its prohibition of shooting within its jurisdiction. During migration, undoubtedly, large quantities of birds pass over London in the night, and are attracted by the glare of its lights. On such occasions, stragglers, exhausted by their long flight, often fall or alight, and would probably remain—at all events for a time—if they could find cover and food.

The greatest ornaments our open spaces possess, apart from the verdure, are the little winged inhabitants, whose presence imports an animation and creates an interest in what otherwise would quickly become monotonous. There is every reason, therefore, beyond the mere question of kindliness, that they should be afforded protection as well as sustenance in time of

need. In the parks there is ample room to allow for the creation of sanctuaries, which, whilst in no way interfering with the people's pleasure, would really add to their enjoyment, and considerably augment the attractiveness of the general surroundings. It is true that a few months since, a prominent labour representative in the London County Council opposed the erection of a small deer pen in Victoria Park, on the ground that it would interrupt the playing of games, to which he urged the whole area should be allotted. In reply to such an argument, if one be required at all, it may be said that there are many in the community who do not participate in athletic sports, and on Sundays, the only days on which the weary toilers are at leisure, such sports are not permitted. Let it be clearly understood that nothing is proposed which would interfere with either cricket or football, but that it is simply desired to take advantage of quiet, out-of-the-way spots which at present are made little use of. In such like situations, it is suggested that here and there—say, in three or four places in each park, according to its size—circular spaces of about an acre in extent should be enclosed with a slight, small-meshed wire, unclimbable fence to exclude all animals, cats especially being most destructive. In the centre, after allowing an outer broad margin of grass to afford facilities for observation, a coppice should be formed and thickly planted with shrubs and trees which the birds love; more particularly those of the oak, ash, beech, hornbeam, hawthorn, hazel, any box, with conifers, furze, and evergreens. These must be allowed to grow wild and remain undisturbed; absolute privacy being the great desideratum. Within the coppice, entirely hidden from view, there should stand a *sanctum sanctorum*, consisting of a rough framework holding together a pile of faggots stacked transversely, with hay worked in the interstices, over which ivy might be trained, and having a sloping thatched roof; the structure being about twelve feet square, and forming in the summer a nesting place, and in the winter a haven of refuge. In addition a small pond, having an edging of reeds, rushes and withies, would be a desirable adjunct. The proposition altogether may on first consideration be deemed what our American cousins term "a large order," but in reality involves but an insignificant expense. Of course, at times of frost it would be requisite to supply suitable food, starvation being a more dreaded enemy than extreme cold.

No pretension of novelty is advanced for the main suggestion made, the idea having already been adopted in other countries with a considerable amount of success. On several occasions of late, the want of something of the kind in London has been mooted, but as yet without result; and it is with the hope of getting the matter practically taken up that it is now brought forward. The County Council has expressed a willingness to assist in kindred objects, and the Commissioners of Woods and Forests have not been behind-hand in the Royal parks. The

charming dell in Hyde Park, with its picturesque undulating aspect, miniature winding stream, rabbits, pheasants, and tame wood-pigeons and sparrows, as well as the eastern end of the ornamental water of St. James's Park, where, in comparative seclusion, the cormorants have nested the last two summers, the heron stalks gravely around, and a small colony of gulls now disport themselves—are moves in the right direction.

Cannot some effort be made to give the proposal of providing sanctuaries a trial? The experiment would not be a costly one, and there is good reason for believing, if carried out, that our population would not only have the opportunity of seeing many birds which at present are strangers to us, but that in the quietude of our evening walks, at the proper season, we should have the pleasure of listening to the nightingales' sweet song as well as that of other of Nature's warblers.

H. Chipperfield.

THE NEST OF THE WREN.

ONE of our birds has a better right to claim a character indisputably its own than the common wren, known to scientific ornithologists as *Troglodytes parvulus*, and to common folk as the "Jenny" or "Kitty" wren. It evinces its independence in the first place, perhaps by way of revenge for the formidable appellation bestowed, by setting at defiance all systems of scientific classification, as it combines in its small person qualities which appear severally to assign it to groups the most diverse one from another. In various other respects it emancipates itself from the usages and conventions of its fellows, as in its perennial song, but in no particular does it follow a line of its own so determinedly as in regard of its nest.

To begin with, this structure—a specimen of which is to be seen in the upper bird gallery of the Natural History Museum—is constructed on a plan quite different from that of those birds with which it is possible to group the architect, and curiously resembling that of the water ousel, or dipper—to be seen in the same gallery—a creature of habits as different as possible, but having sundry other points of resemblance with the wren.

More singular is, however, the habit of constructing a number of nests, which none other of our native birds does, though blackcaps and garden warblers make a sort of rough beginning of several, as if to get their hands in before setting seriously to work. But in the case of the wren, a pair of birds will elaborately finish a couple of nests before they seem to make up their minds which is to be occupied for business purposes, the only difference being that the one so chosen is lined with feathers,

while the other is not. Even after this, when the eggs have been laid and the hen is sitting, the cock—in order, apparently, to be doing something—goes on constructing other nests, sometimes to the number of three or four, so that the same pair of birds may be owners of considerable house-property. A strange feature is that two nests simultaneously constructed appear to be built on quite opposite principles. Thus I have known one set against a wall and entirely made of white bents, rendering it as conspicuous as it could be, while the other, centred by a hole in a rotten beam, was most artistically assimilated to its surroundings.

The wren will, moreover, build in situations the most various —against the trunk of a tree, or against a haystack, in a creeping plant, or against a stone wall—and chooses the most various materials, moss and dry ferns being particular favourites. In the recesses of the nest so built are laid a number of eggs, and we are presented with a problem, which confronts us in many other cases, as to how the parent bird contrives in the dark to prevent the struggle for existence from operating from the commencement—how they hinder the more vigorous and importunate youngsters getting all the food, thus condemning the rest to speedy extinction. There is no doubt that things are somehow so arranged as to secure the rights of all.

The extra nests are not superfluous, and serve a distinct purpose. The wren being so small a bird might be unable to withstand severe cold, which it braves by remaining with us throughout the winter. Accordingly a family party, long after the young are fledged and flown, will assemble to pass the night together in one of their shelter huts—they will even for as many as fifteen days come back to the original "mothering nest," and if they chance to be prematurely driven from this the cock bird will—though not without a good deal of trouble—manage to convey the whole troop to one of his own structures. It has been said by some observers that the refuge nests are built with their openings turned towards various points of the compass, and that one is each day selected according to the direction of the wind. However this may be, it is certain that throughout the winter this mode of obtaining warmth is resorted to: in default of a nest of their own a party of wrens will betake themselves to that of another bird, as many as fourteen together having been observed at Christmas time roosting under the eaves of a barn in that of a house-martin.

JOHN GERARD.

FEBRUARY IN NEW ZEALAND.

FEBRUARY may be called our last summer month. In an ordinary year the ground would be parched and dry, and we should be expecting the thunder showers that usually break up the summer droughts, the first big drops hissing on the thirsty earth and a soft vapour rising from the northern braes. This year (1894) the rainfall has been abnormal; the ground is wet and the springs and rivers are full. February, however, has proved a finer month than January.

During the dry days, millions of thistle seeds may be seen sailing from north and north-west to south and south-east, for with us the north is the quarter whence blow the dry hot winds. Thistles this year, owing to the wet of spring and early summer, are rampant. All over the run the sheep camps are a dense impenetrable prickly forest, and every breeze carries away the down like snow. On such spots, where the ground is highly manured, instances of malformation in the stalk and flower are frequent; thistle stalks may be obtained fifteen inches broad and as flat as a board. From mere thistle beds great quantities of honey are taken by the bees, and in a dry summer, when the clovers are parched and bare, the bee-keeper depends in great measure upon this crop for his honey. Though stock—horses, cattle and sheep—are fond of the purple blossoms, these can be procured only round the edges of the patch, so that the immense majority go to the bees.

Mullein, too, seems to thrive in the excessive wet, for during the last two years it has spread all over the run. During spring, in the early morning when the dews lie heavy, the plant seems like a silver shield in the grass. Sheep will only eat the little leaves that grow on the lower part of the flower spike. I notice ragweed now in the district. No plants have yet appeared on the station; there is little doubt, however, that in five years' time its yellow flowers will be conspicuous everywhere. Not improbably it will be then renamed by the country people, as other British weeds have been rechristened before. Usually they are called after the name of the man upon whose property they first appear.

Now that the flower-seeds are ripening in the garden, numbers of mice come in from the fields. The large grain of the sunflower is an attraction. I can always tell, too, when the mignonette is ready to save, by the presence of cats in the garden; the flower beds are haunted then by these creatures. Earlier in the season the rats are a nuisance among the ripening fruit. They are particularly fond of apricots, climbing the trees and stripping every particle of flesh off the stones. Among the orange trees their ravages are not so marked—at least, until the owner comes to gather his golden fruit. Then he will find it strangely light, and discover that every particle of the inside

has been extracted. This is done without breaking the fruit from the branch where it still hangs—another illustration of the proverb, "All that glitters is not gold."

While talking of my flower garden, the manner in which burnet got there may be interesting, as showing one of the curious ways in which new plants arrive. In 1891, when I was in Scotland, I noticed a plant of burnet in one of my father's rockeries. It was then new to me. I enquired the name and how it got there. It had been taken from Devonshire, I was told, and was valued because of certain associations. Last spring, in sowing seeds in my garden, I came across some in an old envelope. I recollected their shape but could not recall the name. They germinated and threw out leaves, but it was not until I saw the greenish insignificant flower that I recollected the name, and knew that after three years' forgetfulness I had raised burnet in Hawkes Bay, New Zealand, from a plant originally taken from Devonshire, England.

A few nights ago I noticed a couple of bats flying about the house at dusk. In New Zealand there are two kinds; both live in communities, choosing some hollow tree for their home. There they congregate in thousands, clinging to the sides, the successive tiers being packed so closely as to occupy the entire space. Very often their strong smell leads to the detection of these colonies. I have seen bats frequently enough when fishing late in forest lands; indeed, it is not until the bats fly and the earliest stars shine forth that in hot weather the trout begin to move. Where, however, these two came from that were only seen for a single night is a puzzle.

During the fine nights of the month the glow-worms have been very brilliant. They love the damp banks along the sides of roads and little mossy burns; in the limestone caves not very far from here they are extraordinarily plentiful. The larvæ shine most brilliantly in dark damp nights with a light north-west breeze. Their web is suspended in some dark cavity or earthy niche. It consists of a thick glutinous thread stretched across this hollow and supported by several smaller threads running right and left and attached to the side and end of the cavity. On this the larva rests. When disturbed it glides back along the main thread, retreating into a hole provided at the end. From the lower side of this central thread numerous smaller threads hang down and are always covered with little globules of water, resembling a number of minute silver-beaded necklaces. All these threads are constructed by the larva from a sticky mucus exuded from the mouth. Contrary to what might have been expected, no remains of entangled insects are found in this clammy web. The lights in captive larvæ show great irregularity in their occurrence, and experiments tried on female flies brilliantly illuminated did not prove their luminosity successful in attracting males. The writer from whom I take these particulars declares he is still at a loss to explain the light

or food of these interesting creatures, or to account for the web of the larva.

I think I have mentioned the various sundews found on the run and the large number of different insects they entrap. They are by no means the only carnivorous plants in the colony. In the forests we have a scarlet toadstool; this fungus attracts and captures insects by its pungent odour and brilliant scarlet colouring. There is a shrub also whose seeds are covered with a gum so tenacious that sparrows and other small birds are caught wholesale. Not long ago I found a fully fledged wax-eye entangled in the barbed seeds of a lush grass; these seeds adhere also to the collies' coats.

At the very end of the month the leaves of our few deciduous trees begin to fall, but autumn does not arrive fully till March, with its latest flowers and earliest frosts.

H. GUTHRIE-SMITH.

Tutira Lake, Napier,
New Zealand.

THE FIRST SNOWDROP.

HERE on the edge of the wood a speck of white, like a drifted snowflake, catches my eyes, and I stop to gather my first snowdrop—a simple flower of the Order *Amaryllidaceæ* I happen to know, but as I hold it lightly between my fingers and gaze on it with admiring eyes, I think only of its beauty. The purity of its milk-white blossom, the tiny splashes of green just showing on its inner segments, the graceful bend of its downcast head, guarded by two sentinels of green leaves, engender thoughts that surround the flower with a halo of fancy, which long botanical names might only dispel.

My eyes glance from it to the dark ground whence it sprang. I see the brown withered fronds of the bracken trodden and broken, the long straggling shoot of the bramble bearing nothing but its own cruel thorns, the dark tree trunks with bare limbs leading up to the delicate tracery of slender twigs drawn against a leaden sky, and life seems gone from them all. Missing is the wealth of green undergrowth which sheltered so well the rabbit and pheasant, gone from the trees are the leaves that whispered in response to each summer breeze, gone are the clinging tendrils and shapely leaves of the bindweed, the blossom of the briar, the stars of the stitchwort. They were, but have passed away, and as far as any sign they themselves give, may never be again. And it is only now that we really miss them. The bugle and the bittercress, the periwinkle and the mallow, gained but a passing glance and thought when under brighter skies we met them at every step. But now the winds of autumn and the

frosts of winter have robbed the fields and woodlands of every bit of colour, we think of those we once neglected.

And what if they never came again? What if the tiny bead-like buds of green showed no more on the hawthorn? What if the dark soil of yonder field remained for ever fallow? What if the feathered friends never came back from their winter haunts, if the heavy clouds above never more parted to let through the rays of the life-giving sun? How then would we treasure the memories of past delights! A picture of a modest daisy would become a centre around which would gather visions of green meadows, waving corn, the smiling landscape sending back a hundred different hues all in perfect harmony with the blue sky above, and then as the fancy died away and we came back to the bleak world, cold and drear, we might realise what we had lost, and sigh for those pleasures now beyond recall.

But these are speculations as to what shall never be. True, the trees show no signs of life; true, the dead leaves lying thickly beneath my feet seem but the emblems of decay. But my fingers still hold the little snowdrop, and as I look at its simple beauty I see it as a flower of hope, as the harbinger of coming life, and I know that soon the earth will arouse herself from her winter sleep, that once more the banks will be radiant with primroses, that the violet will send out again its delicious perfume; and even as I muse, a little robin from a thorn close by trills out his song, as if to tell a listening world to wait and hope.

FRED. W. ASHLEY.

A TASMANIAN HEDGEHOG.

ONE afternoon, early in the present season, while strolling along the track to a deserted silver mine, we were fortunate enough to encounter one of the strange creatures commonly called porcupines (*Echidna setosa*), also taking an afternoon walk in the same locality. He was going along the edge of the road, which is a very rough one, just at the bottom of a bank, which he did not seem able to climb. We followed him for about one hundred yards, and so had a splendid opportunity of observing the style of walking and general appearance of the creature in its wild state, an opportunity which would not be likely to occur twice in a life-time. It must not be inferred, however, that they are so scarce as never to be seen; on the contrary, they are tolerably numerous in the neighbourhood of Mount Bischoff, but they hardly ever leave the bush, and on hearing footsteps at once proceed to sink into the earth, so that there is no chance of getting more than a few seconds' observation.

The pedestrian encountered on this particular afternoon was quite unable to refuge under ground in the orthodox echidna fashion, for the simple reason that the road on which he had ventured was nearly as hard as rock, and beyond the scratching powers of even his long, powerful nails, so he simply trudged along steadily, keeping a sharp look out on both sides with his inquisitive little pig-like eyes. Now and again, as he caught sight of us in his wake, he would stop, tuck his head in under his body, and fold his fore legs tightly over it for protection; as we also stopped and remained quiet, in a very few seconds he would unpack and proceed on his journey, to repeat the same caper again after a little.

From our notes made at the time, we find that he has an awkward, waddling gait, the hind feet having the flat part uppermost, with the back of the wrist, so to speak, resting on the ground. It was ludicrous to see him try to walk along a small spar which was lying in his track, as the hind feet, quite unadapted for such work, kept slipping and hanging down, one on each side the spar, bringing his portly person flat on the wood at each mishap. Altogether it reminded one strongly of a competitor at the greasy pole. When he came to a spot in the ground that was rather softer than usual, he would poke his nose into it, as if searching for insects, and would also smell about under the stones and bits of wood which he passed. The eyes are small, black and elongated like a Chinaman's, giving the face a comical aspect when coupled with the very long straight nose. The fur is dark brown, and studded all over with short, sharp quills, which stand out erect and bristling when the animal is in its danger attitude. In soft ground this consists in scratching the soil from under itself until the under surface of the body, which is devoid of fur or spines, is quite concealed, and then tucking in the head and legs very snugly so that nothing is visible to the foe but a rounded surface of stiff spikes. Dogs get nearly frantic when attacking a porcupine, as every pounce they make causes them to get severely pricked in the nose, and they return again and again to the charge, each time with increased fury. We were fortunate enough to make an observation, which proves that these quills are useful in other ways besides protection.

Our friend on the Silver Cliff Road at last came to a place which he thought he could ascend, and make a short cut into the bush. When partly up, he came to a small branch lying along the bank, and a few inches above it; he pushed his head through this aperture between the stick and the bank, and then set up the quills on the back of the neck to get a purchase against the stick until he got a fresh grip with the legs. By this simple device he got triumphantly through the narrow opening, reached the top of the bank, and was soon lost to sight in the undergrowth.

Our friend Echidna, prickly and plain-looking though he is,

may be said on one occasion to have saved a hero's life. When "Philosopher Smith," discoverer of the great tin mine here, first reached Mount Bischoff after many days of travelling through the trackless bush, he was tattered, forlorn and almost provisionless; but having the good fortune to fall in with some porcupines, he lived upon them, discovered the metal, made his way back to civilisation, and a name in the annals of Tasmanian adventure.

H. S. Dove.

Mount Bischoff, Tasmania.

SOME COMMONPLACE FOWLS.

SOME years ago my wife became a hen-wife. A sufficient hen-house being established, she purchased as a bargain, some half-a-dozen ordinary fowls, of mixed breed —touches of Spanish, of Brahma, of Dorking, traits of Andalusian, and faint traces of their far-off ancestor, the jungle fowl of Bengal.

My children fed them well. Pepper, they were told, made hens lay, and they emptied the castor. Barley, maize, oats, bread, potatoes, scraps—never were fowls so fed. But they had magnificent constitutions. They stood it all and laid well. They became very tame—pets, in fact. Descriptive names were given them which explain themselves—Crookbeak, Longlegs, Stingy (which in East Anglia means ill-tempered), Hippety-hop.

Longlegs and Crookbeak were tall, stately fowls of a giraffe-like build, placid in temperament. They would permit Jim-jam, the youngest but one of the household, to take hold of their tails and march them around the grass-plot. They are dead.

Stingy is one of those restless, vicious, vital beings, with a store of energy which must find outlet—generally in being a complete nuisance to the quieter hens. She never *can* let the others alone for long, and races hens, who by goodhap have a tit-bit, round and round the hen-house till it makes one dizzy to look at her. She still survives.

But it is of Hippety-hop I should like to speak. She has just died, amid universal regret. Hippety was a black hen, hump-backed, and lame, and quite a character. She never had all her feathers on at once. Our cockerel, a fine, well-built, upstanding bird, although of no particular breeding, often gazed at her in amaze, I suppose at her ugliness, but yet, like a good fellow, cherished her duly. Nature had compensated her for the lack of outward graces by many qualities, some admirable and some not, at least, from our point of view. She was a good layer, a diligent sitter, a devoted mother. Her pet weakness was worms. In picking up these—or indeed any kind of food—she

was far and away ahead of all the others in quickness of sight and nimbleness of appropriation.

Some of the boys who attend the village school come from a distance and bring their dinners with them, and are glad in the summer months to do odd jobs about my garden. From June to October they are very willing to sift cinders, sweep the paths, &c., for the privilege of eating their noon-meat in peace, protected from the onslaughts of the boys of our own village, who have big brothers and mothers to take their part in cases of difficulty. One notices, that, somehow, the gooseberry trees that line the garden path bear heavier crops on the garden side than on the path side; that the apples on the lower branches of the trees do not all come to perfection; that there are unaccountable gaps in the hedge. But I can remember the time when I, too, could appreciate the flavour of an unripe gooseberry with the best, and they are good boys on the whole and discreet.

One of them, Teddy, not long ago asked if he might feed the hens. He was permitted to do so, but incautiously held in his left hand as he entered the precincts of the hen-house his "thumb-piece," *i.e.*, a hunch of bread with a morsel of cheese under his thumb. Hippety, who was apparently dozing, made a miraculous leap and had the cheese! She forthwith rushed round to the back of the building with her prize, and long before Teddy had recovered his senses, or any of her fellows were aware of what was happening, had gobbled it. Teddy came back and made a representation of his case at the back door. He hadn't even "tasted of it." My eldest son ran down and scolded Hippety, but she only crouched at his feet and looked up with a "gallus" kind of submissive acquiescence. She knew she ought not to have taken it, but the taste of it was sweet to her palate, and now no one could take it away. Necessarily, Teddy was supplied with a fresh piece, which, however, did not bite his tongue as good cheese should, and he never really forgave her. Space will not suffice to tell how she by cunning more than held her own among her mates, or slipped past one into the garden, where she wrought devastation (she had also a weakness for spring onions), eluding capture. It usually took four boys placed at separate points of strategic importance, and one or two skirmishes to get her back.

Men and women, and hens too, die, and at last—Hippety-hop's time came. She died on her nest after a few days' indisposition, and rests among the fruit bushes. This was a month ago, and, strange to say, the other hens will not lay where she died. They took up quite other quarters for their egg-laying business on her demise. Lately, some have returned to the adjacent nests, but not one to the deathbed of Hippety-hop.

J. Lewton Brain.

TO A GOLDEN-CRESTED WREN.

Airy creature, restless sprite,
Flashing like a beam of light,
Stay a moment in thy flight,
Come thou near me.
Fluttering from spray to spray,
Darting quick upon thy prey,
Prithee for a moment stay,
Dost thou fear me?

Patiently I follow thee,
Watch thy motions light and free,
Ever disappointing me,
Teasing fairy;
Like an acrobat thou art,
Playing thy appointed part,
Here and there with nimble dart,
Quick and wary.

Now a moment dost thou rest,
I can see thy golden crest,
Quick bright eye and downy breast;
Doth aught alarm thee?
Ah! what enemy is near?
Tremblest thou with sudden fear?
Courage take! while I am here
None shall harm thee.

Who in cruel wanton sport
Would thy joyous life cut short,
Or for want of loving thought,
Would not shield thee?
Rather do thy wondrous ways
Thoughts of admiration raise,
And to thy Creator, praise
Thankful yield we,

Who has given to our care
Countless beings, bright and fair,
Who with us His bounty share.
In wilful blindness
Shall we His great trust abuse,
And His gracious gifts refuse,
Nor towards His creatures use
Loving kindness?

Mary C. Walton.

FROM ACROSS THE ATLANTIC.

We have several home-made books awaiting our notice, but on the present occasion we propose to talk about some friends who have come to us from across the Atlantic, and who deserve a hearty welcome in the old country.

In Nature Notes for 1893 (p. 69) we published a charming article entitled "Sport without a Gun," which a friend had shown us in the *Photographic News*. "This suggestive and thoroughly Selbornian article," we said, "is quoted from *Our Animal Friends*, an American book of which we should like to know more." We asked whether any transatlantic reader would send us a copy. Not long after came a friendly letter from Mr. John P. Haines, the President of the American Society for the Prevention of Cruelty to Animals, saying that the work in question was the monthly organ of his Society, and that he was sending us a copy; but it never came. Last autumn we reminded Mr. Haines of his kind promise, and promptly there came to us a parcel of numbers from July, 1893, since which time we have so far regularly received this admirable periodical.

It costs a dollar a year, or ten cents a month, and is thus a good deal dearer than our own *Animal World*. At the risk of appearing conceited, we may say that the style of its contents strikes us as a judicious blend of the *Animal World* and *Nature Notes*—the practical teaching of the former combined with the natural history observations of the latter. But we must add that our American cousins seem to have avoided the extremes of the *Animal World*, on which we have sometimes had occasion to comment; while the fact that the birds and beasts talked about are unfamiliar to us gives a freshness to the observations about them which we cannot claim for our own records, though we may hope that our transatlantic friends pay us a similar compliment.

We do not know whether *Our Animal Friends* is known to Selbornians in England, or whether our own ignorance was exceptional; but if not known, it certainly should be. There are many to whom the annual subscription would be no obstacle, and those who have to do with Bands of Mercy, Selborne libraries, and the like, should not fail to secure such a treasure-house of *new* matter. From a literary and artistic standpoint, apart from the interest of its subject, *Our Animal Friends* claims a high place; and we regret, as we are so often obliged to do, the exigencies of space, which prevent us from quoting some evidence in support of our proposition. No better prize for Bands of Mercy and similar organisations could be found than the annual volumes, the contents of which would have the merit of being entirely fresh to the fortunate recipients. If we succeed in introducing this excellent journal to English Selbornians we shall have done a good work.

We expect beautiful books from the "Riverside Press" (Houghton, Mifflin & Co., Cambridge, Mass.), and here are two—*A Florida Sketch Book*, by Bradford Torrey, whose name is as new to us as that of Mr. John Burroughs, the author of *Riverby*, is familiar. Miss Fowler has from time to time published notes from Florida in our pages; here we have a series of articles in the Jefferies-Burroughs vein, accompanied by an index moreover, which has hitherto been a desideratum in works of this kind.

Mr. Torrey differs from the writer we have mentioned in that he makes friends more readily with the inhabitants of the places he visits. There is thus more human interest in his books than in those of similar authors. "There came along a man in a cart, with a load of wood. We exchanged the time of day," is a typical sentence; and boat-boys, negroes, horse-men, and other varieties of the human race mingle not unpleasantly with birds and beasts, flowers and ferns. Among the best chapters is "On the Upper St. John's"—a record of his excursion with "a youthful boatman, expert alike with the oar and the gun," who served him "faithfully and well, impossible as it was for him to enter fully into the spirit of a man who wanted to look at birds, but not to kill them." Mr. Torrey, a believer in "sport without a gun," made his young friend a partial convert to that form of enjoyment. "He had looked through the glass now and then, and of course had been astonished at its power. 'Why,' he said, finally, 'I never had any idea it could be so much fun just to look at birds in the way you do!' I liked the turn of his phrase. It seemed to say, 'Yes, I begin to

see through it. We are in the same boat. This that you call study is only another kind of sport.' I could have shaken hands with him but that he had the oars."

Is it because Mr. Burroughs tells us so little about his own species and so much about every other that we prefer him to Mr. Torrey? In spite of the time-worn aphorism as to "the proper study," we fear it is so. At any rate, he gives us a *personal* interest in the things he describes, which Mr. Torrey fails to convey, pleasant as his essays are. *Riverby*, the title of the book, is "the name of my place here on the Hudson, where the sketches were written, and where for so many years I have been an interested spectator of the life of nature, as, with the changing seasons, it has ebbed and flowed past my door." Those who do not know Mr. Burroughs's books should read Mr. Warde Fowler's appreciation of them in NATURE NOTES for 1891, p. 290; those who do will join in our hope that this will not, as the preface indicates, be his "last collection of out-of-door papers."

As an example of observation, what can be better than the description of "the early species of everlasting, commonly called mouse-ear," in the first delightful chapter, "Among the Wild Flowers." He is like Mr. Grant Allen at his best in his powers of description, with the additional advantage of freedom from wild speculation and untrammelled imagination. In the chapter "Lovers of Nature" we have Mr. Burroughs's estimate of Thoreau and Richard Jefferies, hardly, we think, as appreciative as might have been expected. "Richard Jefferies was not strictly an observer; he was a loving and sympathetic spectator of the nature about him. A poet if you please, but he tells us little that is memorable or suggestive"; while as to Thoreau, "considering that he spent half of each day for upwards of twenty years in the open air, bent upon spying out nature's ways and doings, it is remarkable that he made so few real observations." "Hasty Observation" and "Talks with Young Observers" are full of suggestiveness; but Mr. Burroughs ought not to misspell the name of one of the greatest of American botanists—"Torry" for Torrey. There is, indeed, or it seems to us, more variety in this than any of his previous volumes, and even more freshness of description; and this, as every reader of Mr. Burroughs will admit, is no small praise.

A suggestion contained in one of the essays in this volume has already been acted on, though we are bound to say it does not seem to us a very happy one. "One of these days," says Mr. Burroughs, "some one will give us a handbook on our wild flowers, by the aid of which we shall all be able to name those we gather in our walks without the trouble of analysing them. In this book we shall have a list of all our flowers arranged according to colour, as white flowers, blue flowers, yellow flowers, pink flowers, &c., with place and growth and time of blooming." This idea suggested to Mrs. William Starr Dana her pretty book, *How to know the Wild Flowers* (New York: Charles Scribner's Sons), which is already in its fourth edition. Taking for her motto this passage from Jefferies: "The first conscious thought about wild flowers was to find out their names, and then I began to see so many that I had not previously noticed; once you wish to identify them, there is nothing escapes, down to the little white chickweed of the path and moss of the wall," Mrs. Dana proceeds to guide us to "the names, haunts, and habits of our common wild flowers." In spite of its unscientific arrangement, this is an excellent book, and cannot fail to bring about its object, so long, that is, as sedges, grasses, and the like are avoided, for these troublesome groups are entirely omitted. There are useful introductory chapters, and a scientific description of each species precedes the popular account of it, which latter often contains much interesting information. The mode of arrangement by colour, however, separates members of the same genus: thus the green *Asclepias verticillata* is on p. 110, the pink *A. Cornuti* on p. 192, and the "red" *A. tuberosa* on p. 222. The introduction of cross-references under these would at least enable folk to bring allied plants together, though it may be contended that this is sufficiently achieved by the index. A word must be said in praise of the very excellent illustrations by Marion Satterlee, nearly all of which are original drawings from nature. We have seldom seen figures in which the habit of the plant is more accurately rendered.

SELBORNIANA.

The "Aigrette."—Miss S. I. Maude has long wished that some one would invent an "aigrette" to take the place of the osprey-plume in a lady's bonnet. She thinks it just possible that some women may be persuaded to give up tearing the plume from a living bird's head if a substitute of coloured wire be offered them, and she is trying to contrive such a substitute, and may be communicated with, *by letter only*, at 125, Earl's Court Road, S.W.

Protection of Birds.—Readers of NATURE NOTES will be glad to hear that the General Purposes Committee of the County Council of Cumberland have agreed to recommend to the Council, if the goodwill of the landed proprietors be obtained, that certain well-defined nesting areas shall be protected along the Solway, where many of the rarer sea-gulls breed; and also have determined to schedule the eggs of the following birds throughout the county for protection: bull finch, buzzard, dotterel, dipper, gold finch, kingfisher, kestrel, merlin, owls, pied flycatcher, peregrine, woodpeckers. I have given these in alphabetical order, and of course our County Council may alter the list; but it may be a guide to other committees who are interested in the preservation of birds of use and beauty for future England.

H. D. RAWNSLEY.

Gold Fish.—Should it be regarded by Selbornians as cruelty to keep gold fish in a bowl of water without supplying them with food? I have two in a bowl, but if I give them ants' eggs, or food of any kind, the water very soon becomes misty and bad, and the fish rise to the top of the water and "make bubbles." If I give them no food, the water remains clear and fresh for some days and the fish do not come to the surface. They *appear* none the worse, and seem to have little inclination for food. Are they capable of feeling, or of suffering from hunger or weakness, or in any other way? Does the water itself contain sufficient nourishment for their requirements? Can we suppose that "cold-blooded creatures" are incapable of feeling pain of any kind?

C. E. C.

NATURAL HISTORY NOTES AND QUERIES.

Kingfisher mobbed by Starlings.—One cold day last month I was walking by the river when I noticed a kingfisher fishing from the stump of a decayed willow tree; when he had caught a fish a small flock of starlings swept down on him and a most exciting chase began. The kingfisher flew away low over the water, uttering a shrill cry of alarm; the starlings followed and rapidly gained on him, then there was a slight splash and I could only see the starlings flying forward, then again I saw the kingfisher, but this time flying quickly back; so, by diving, the kingfisher escaped. I do not expect the starlings had any intention of attacking the kingfisher, but merely wished to capture the fish. I may say that the recent great floods in this neighbourhood seem to have greatly interfered with the kingfishers, which are much less frequently seen now.

Staines. GRAHAM W. KERR.

Tortoise (p. 17).—Having possessed my present tortoise for thirteen years, my experience may help your correspondent. Our garden is 24 yards by 7; grass plot in the centre, and a few evergreens round the walls. I do not consider the latter sufficient protection for "Thomas" from the frost, or even rain in summer, so always have a shelter made for him in the sunniest corner—a raised cinder bed over which I put boards and oil-cloth, blocking one end and filling with hay. Through September I always look to see if he is there at night, and in October take him in for good. I then put him in a box of hay or shavings (a layer of cinders at the bottom) and place it in a dark corner in the morning room. The

danger of leaving the creature out is that early in the spring a few hot days would tempt him to leave his burying place, and being still too torpid to return, he would be killed by the next frost, or most probably in the unsuitable soil of a garden he could not bury out of reach of the frost. About April Thomas tumbles out of his box and holds up his head beseechingly; a saucer of cold water is given him, he dips his head in and drinks for twenty minutes or so. I generally put him out in the sun for an hour or two daily, and supply him with lettuce, dandelion or common mallow leaves, but do not leave him out all night until the May frosts are over. I do not think it kind to put tortoises (European ones, I mean) in greenhouses, they hate damp and moisture, and are excellent weather glasses if left to their own devices in summer. I feed my pet regularly here, and he will follow me anywhere. His favourite foods are buttercups, mallow, dandelion, white and pink clover, roses, snapdragon, sweet and everlasting peas, the young shoots, too, foxgloves, white pinks, lettuce, strawberries, gooseberries, grapes, cherries (I take stones out), plums, blackberries, bananas, columbine and nasturtium leaves, all young seedlings, if he gets the chance. When away he is given the run of the gardens, and has had many adventures—wandered long distances. A bank in a meadow is his favourite resting place, and if not near a road I let him choose his home; if left alone he always retires to the same bed at night—he prefers a rabbit burrow. Under these conditions I do not feed him, only bringing him food when I hunt him up daily, and he thrives and grows very heavy. Do not put tortoises in water—they detest it; I sponge mine sometimes if his shell gets very dusty.

Hove. M. A. MORGAN.

We have had a tortoise for two and a-half years; he has escaped several times, but always found and brought back. He likes a tepid bath in the summer, sitting in the water and drinking for some minutes, and also likes to have warm water poured over him. Tortoises like rather untidy gardens, as they eat various weeds, dandelion leaves and stalks—the stalks particularly, as they contain so much moisture—sorrel, lettuce, buttercups, the sweet-pea flower, tomatoes, strawberries, and some stone fruit. My tortoise remains in the field all winter, but is covered with a box lid, hay and matting, so as to keep the frost from him. When they wake up in spring they do not require any food or water for a fortnight. H. B. C.

Delayed Germination of Seeds.—In the November number Mr. Henslow doubted the germination of seeds after they had been in the ground for a long time. I do not know what he calls a long time, but a few years ago I took in hand a garden which had been neglected for several seasons. Immediately a large number of Port Jackson willows sprang up. On inquiry, I found that there had been one of these trees in the garden, but it had been cut down six years previously. There were no others in the neighbourhood. The seeds, therefore, must have been lying *in situ* for at least six years before germinating.

Cape Town. F. C. KOLBE.

Roosting Habits of the Wren.—Many years ago, when living at Carisbrooke, I observed during the whole of one winter that every evening when the twilight deepened, a little brown wren flew into the rose bush which was trained along the edge of the verandah. It hopped from twig to twig uttering a peculiar cry, like c-r-r-k—c-r-r-k, and then it flew into an old withered fern which hung in a wire basket suspended from one of the ribs of the verandah, some little distance from the wall of the house. At first I scarcely thought the little bird went there to roost, but as I sat watching in the dark, I presently saw another wren fly into the old fern, and then another, and then another, till I had counted six. To satisfy myself that they really roosted there all together, the next day I mounted upon a pair of steps, looked into the old fern in the basket, and I saw evidences that proved that the six little wrens did make their bed there. I found there was a hollow space in the middle of the fern with moss. This I enlarged somewhat, and lined it with cotton-wool to make a nice warm nest. The wrens quite approved of the arrangement, and came every evening to roost there. I should imagine the wrens roost like this in order to keep warmth in their tiny bodies during the sharp cold nights of winter. E. PRICE-SAYER.

[See Father Gerard's article on p.25.—ED. *N N.*]

Rooks.—The behaviour of these birds, with many of whom I am on terms of intimacy, is, to say the least of it, eccentric. One day, when, as my custom is always in the morning, I go out with a bowl of provender for the wild fowl and pigeons, from twenty to thirty birds come flocking down—from whence I cannot tell, for not one is previously visible, either on the meadows or the trees around—to partake of the feast. Another day, for no apparent reason, under similar conditions of weather, one or two or none put in an appearance. The birds know me well, and settle on the iron rails within two or three yards of me. This, though, only while I do not look directly at them; on my doing so they incontinently take flight. They seem unwilling to meet my eye, perhaps conscience-stricken, for, like all their tribe, they are sad thieves, and prefer to steal rather than accept what is given to them. But why do they come one day and not another? I observe that they are already forming matrimonial arrangements: their flirtations are singularly grotesque.

GEORGE ROOPER.

TO CORRRESPONDENTS.

D. E. M.—Please comply with our first Rule.

R. J. P.—Such hibernated specimens are not uncommon.

E. B. L.—Not an unfrequent occurrence.

E. H.—Many thanks, but we are not in a position to incur the expense of illustrations.

Chris.—Dr. Sharpe says, it is not usual for woodpigeons to eat holly berries, but there is no reason why they should not do so.

F. D.—It did not seem to us that the note added anything of importance to what Mr. Carruthers had written; and we are compelled to economise our space.

A. P.—Mr. W. F. Kirby says the larger caterpillar is probably *Pygæra Bucephala* (buff-tip moth), the smaller *Porthesia auriflua* (gold-tail moth). Of the pupæ, the larger one is that of a lepidopterous insect, the barrel-shaped one is that of a dipterous insect. It is not possible for *two* caterpillars to emerge from one larva skin, unless they were parasites on the larva; in any other case there must have been some error of observation.

Miss H.—The plant is apparently a *Hippeastrum*, but the material is insufficient. As to treatment, consult a gardening newspaper.

J. M. W.—Mr. R. I. Pocock says: "There seems to be very little doubt that the foundation lines of a spider's web are carried by air currents. A thread of silk is so light that a very slight movement of the air is sufficient to carry it from the spider to a point at a distance of several feet."

We have still several books awaiting notice, some of which we hope to deal with in our next issue.

We must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

SELBORNE SOCIETY NOTICES.

Poisoned Grain (See NATURE NOTES, vol. v., p. 160).—The Council learn with great satisfaction, that the vendor of the above has again been heavily fined. It would seem, however, that the business is a very profitable one, as it was asserted that the defendant had already been convicted *nine* or *ten* times for the same offence.

Bibliography of Gilbert White.—To those who have kindly communicated particulars of their editions of "Selborne" to Mr. Martin (see NATURE NOTES, vol. v., p. 220), he wishes to tender his best thanks, and he would be glad if others who have not yet done so would favour him with dates and other particulars of any ancient or modern editions they may possess.

Field Club.—The Field Club Committee will meet at 6.30 on Tuesday, February 5, to arrange Rambles for the first half of the Session, April to June.

Donations to Leaflet Fund.—The Magazine and Leaflet Committee acknowledge, with grateful thanks, the receipt of the following donations to the Leaflet Fund:—Birmingham Branch, £2 2s.; Mrs. John Shepherd, £1; F. W. A., 10s. 6d.; Miss H. M. Dods, 5s.; Mrs. F. Fitzmaurice Hunt, 2s. 6d.; Rev. G. C. Green, 2s. 6d.; Miss Averdieck, 1s.

Council, Committee and Field Club Meetings.—The next meetings of the Council will take place on February 5, and March 5, at 5.30. The Magazine and Leaflet Committee meet on February 20 and March 20 at 5.30. The Finance Committee meet at 6.30 same evenings. The Field Club Committee meet on February 5 at 6.30.

NEWS FROM THE BRANCHES.

Barmouth: Bedhampton.—The Council are glad to learn that these Branches have held very successful inaugural meetings, and to find that a goodly number of new members have joined each Branch.

Bromley.—A Branch is in process of formation in this District. The lady who has kindly undertaken the Hon. Secretaryship is Miss E. V. Tebb, *temporary address*, care of Dr. Fleming Phillips, St. Austell, Cornwall.

Cheltenham.—The Hon. Secretary, Mr. F. W. Hayward Butt, has changed his address to 21, Lansdown Terrace, Cheltenham.

Clapton.—The third social evening of the Session was held on Saturday, January 5, when papers on "The Clothes Moth," by Mr. E. A. Nash, and on "Some Flowers we have met in our Rambles, and the Legends about them," by Miss Temple, were read and highly appreciated. Vocal and instrumental music and refreshments concluded a very enjoyable evening.

Forth.—The Council learn with very great regret that Miss Isabel Waterston has had to relinquish the Hon. Secretaryship of this Branch, in consequence of her leaving Scotland; and they desire to tender her their best thanks for her able services.

Pinner.—A second interesting address on "Leaves and their Development" was given recently by Mr. Louis Davis at a Drawing Room Meeting at "The Hall," by kind permission of Mrs. Nugent. The subject was made clear to the young people by drawings and a further address was promised on another occasion. The Treasurer said there was no doubt the Society was taking a firm hold in the neighbourhood, and the interest in its objects was increasing.

BRANCH CONTRIBUTIONS.

	£	s.	d.
Birmingham	3	8	8
Northern Heights	2	6	6
Wimbledon and Putney	3	0	0

Notes for this page must be received not later than February 15 to appear in March issue.

Nature Notes:
The Selborne Society's Magazine.

No. 63. MARCH, 1895. Vol. VI.

A WHITE WORLD.

WE long for the thaw to come, for the sake of the unemployed, the suffering, the weakly; for the sake, too, of the birds and animals about us. Here on the borders of Dartmoor we have looked out for eighteen days on this white world; it is as though the earth were encased in a crust of frozen snow. Those who live amongst other houses and gardens, where there are always some kindly residents to throw out scraps to the birds, have no idea of the difficulty there is in supplying the wants of our poor feathered friends in the heart of the country, every day bringing in more starving outsiders.

Have we sufficiently realised what this white world means to our birds? It means to them the disappearance of all their familiar landmarks, the freezing up of their water supplies, and the covering over of their happy hunting grounds with a hard, cruelly-cold white sheet. No wonder that at first they are bewildered, and flop helplessly about in search of food, especially the soft-billed birds, thrushes and blackbirds notably, who look in vain for the treasures of worms, slugs, and snails, generally to be found in a tempting profusion. I read a recent inquiry in Nature Notes as to how much birds are guided by scent in their search for food. Anyone who studies the habits of birds when feeding, especially in time of frost and snow, cannot doubt that sight and hearing are more to birds than scent: I am not now alluding to carnivorous birds of prey. When first this severe weather set in, many of the birds seemed dazed, unable to distinguish food either on the dazzling snow, or even at times on the bare piece of gravel swept for them, even though it was hot, and frequently had savoury scraps off our plates mixed in their meal. The finches, tit-mice, and the inevitable sparrows, were

much the sharpest. I was throwing out some crumbs of plum cake one day, when one of our robins made a dart at a dry beech leaf on the snow which was much the same colour as the cake; he took it in his bill, and then looked, for once, quite ashamed of himself on discovering his mistake; the other birds were too intent on securing each their own portion to laugh at him, so to cover his confusion I aimed a crumb at him, with which he quickly retired to the privacy of his own bush.

We have a blackbird who has had the misfortune to lose one claw; his sight was sadly defective in the first days of snow, but he has now become more accustomed to his white surroundings. He dearly loves a bit of cake or sweet pudding. The other day, when a greedy sparrow snatched a bit of cake from under his bill, the poor thing gave a piteous, almost human, cry of distress. He seldom fails, however, to secure his portion now; I begin to think he knows the sound of the cupboard door where we keep the cake, as he generally comes flying to the door or window to meet us, almost before we open them, when armed with cake.

Even jackdaws do not seem to have much sense of smell. We occasionally throw out a chop bone to them from the table, but it is generally the immediate descent of tit-mice upon it that tells the other birds where it is, as its warmth causes it to sink slightly in the snow; then a robin will take a peck, and next a blackbird will drag it for a little distance, until driven off by three or four other blackbirds, and then down swoops the jackdaw. He will carry off a big crumb or a bit of biscuit with a stately sweep, not pausing to alight, but the bone has to be firmly steadied in his beak, so, with ungainly gait, he alights, and, with a look of triumph in his blue eyes, carries off the treasure to a neighbouring tree.

We find the rooks very difficult to deal with in this severe weather; they are frightened of coming very near to the house amongst the other birds, and very stupid at picking anything up off the snow—but accustomed as they are to picking insects out of green fields or brown earth, can we wonder? I notice that Yarrell comments on the hard shifts for life that rooks are put to in severe frosts, being entirely dependent on sight in finding food.

We put out messes of hot food several times a day, going on the plan recommended by Dr. Jessopp in his booklet, *Pity the Poor Birds*, only we add well steeped dog biscuit to the bread, barley meal and hemp seed, and the jackdaws, and occasionally an enterprising rook, pick out the biscuit with much zest.

Our invalid blackbird for some time asserted his right of property, but had to give up the unequal contest, as every day brought new comers. One, whom we have named the Usurper, imitates the Invalid, by holding up one leg, and sitting on the snow close to the house in the hopes of a bit of cake coming his way, just in the Invalid's attitude. We can only distinguish the

Invalid from the Usurper by opening the window or the door, and calling him, as then the Invalid flies to us, but the Usurper from us!

The pluckiest of all our small birds is a blue tit, whom we call Puck, from his impish love of teasing. We have a half coco-nut in a window box on our dining-room window sill, and it is the aim in life of this small bird not only to reign supreme over this tiny kingdom, but to render miserable the life of a certain great tit who comes to it, and who, from his magnificent gestures and utter inability to cope with his mite of a foe, we have named the Mandarin; standing on the edge of the coco-nut, he sways his body to and fro like a trained athlete, spreading his wings and tail with the majesty of a spread eagle; while Puck slides along, hisses, makes evil faces at him, pulls his spread tail, pecks his legs, hides, flits, and is here, there, everywhere at once! We wonder the Mandarin doesn't annihilate his tiny foe. Only once have we seen him aroused to real fury, and that was when Puck mocked his gestures, spread his little wings and tail, and tried to look like him. Then the Mandarin turned on him, and gave him such a peck that Puck disappeared for the space of at least a minute. On another occasion, in a delusive gleam of frosty sunshine, the Mandarin suddenly found his spring voice, and chirped loud and sweet from the coco-nut; this so astonished Puck that he took instant flight to the lawn! But the effect of the voice soon wore off, and Puck became as impertinent as ever.

During this stress of severe weather we have noticed how many of the birds who come to us from outside for food are suffering in their claws or legs, and at first are unable to stand for long, but take their food sitting or squatting on the ground. A miserable looking little robin, with no tail, and looking like nothing but a few ruffled feathers, came to us one day last week, and with the proverbial lack of robin brotherly love, was promptly flown at by two of our resident robins, and pecked and buffeted. The poor little thing fluttered against the window pane (where I was standing) for protection, so I opened the window and gave it a crumb soaked in warm water, off which it made a good meal, and then retired into the ivy. But the poor robin could not stand, and a more pitiable sight I never saw. However, I see it now quite lively, and watching its opportunity to get a meal when the ill-tempered residents' backs are turned.

A small flock of starlings in a miserable plight bore down upon us one day, taking possession at once of the feeding ground, and at first none of them stood, but all squatted on the ground to eat.

Sad, indeed, it is to hear of the suffering caused by this long-continued frost. When these notes are printed let us hope that the clouds of snow and depression may have dispersed, and that the tale of suffering may be only remembered as a story. In the meantime, whilst helping in every way possible, let us not forget

our poor little feathered friends, without whom so much of the sweetness, brightness and merriment of our spring and summer would be wanting.

Chagford, S. Devon. HELEN J. ORMEROD.

MARCH IN NEW ZEALAND.

AUTUMN begins this month, in rather a half-hearted way, to hint of its presence, for in New Zealand we miss the beautiful changes and the golden and red and yellow of the leaves. In truth the woodlands of the colony taken as a mass vary little, spring, summer, autumn, and winter. The seasons are not so sharply contrasted as at home; still there are certain facts that indicate the fall of the year.

The leaves of the fuchsia are yellow and ripe in the younger wood, or lie rustling and curled on the ground, affording almost the only autumnal colouring on the run. There are several flowers, too, that belong to March. The graceful whau-whi is now in bloom; it bears a profusion of delicate white cherry-like blossoms, and always late in the year. With us the tree is an evergreen, but at higher elevations it becomes deciduous. Its bark is very tough and does well for tying up flowers, &c., in the garden. The tree is called "thousand-jacket" and "lacebark" by the settlers, owing to its numerous thin layers of perforated lace-like bark. The Maori girls make hats of these thin light skins, but unless stiffened they are too soft and flappy for comfort.

The shrubby veronicas are among our more prominent autumn flowers. Many of our New Zealand veronicas are to be found in greenhouses at home, where they are admired for their graceful habit and long spikes of bloom that vary from purple to pink. Horses, cattle, and sheep are very fond of the leaves, and the wild cattle in unused country may be seen wading through the dense fern on purpose to obtain the succulent sweet boughs. The green leaves when thrown into fire exude a substance that appears a little like fat, and the natives account for it thus.

Once upon a time a Maori chieftain, having had a son born to him, sent across the water for the great magician Kae to come and perform the proper rites. This Kae did very fully and fortunately, and in order to honour him suitably, the chieftain on several occasions called up from the sea his pet whale Tutunui and cut a steak from his side. Now Kae found the flesh so excellent that he determined to steal the whale. With that purpose in view he put off his departure

on various grounds, until at last to get rid of him his host exclaimed, "Sit on the back of Tutunui, he will take you over; but be sure to let him go when you reach shallow water." Kae, however, when he neared his village, stamped on the whale and drowned it, and then called upon his people to devour Tutunui. But the owner of the whale, recognising the smell of the roasting flesh, determined on revenge. A party of women crossed, and knowing Kae by the whale flesh that adhered to his jagged teeth, by the aid of powerful enchantments carried him off. He was killed and eaten—an awful warning to those who steal pet whales. Ever since poor Tutunui's flesh was covered with veronica leaves in the native ovens, these leaves have, upon exposure to fire, shown marks of the whale fat.

Owing doubtless to the abnormal rainfall, I notice many shrubs flowering now—the karamu, that later is covered with quantities of coral buds; the kaiwhiria, with its delicious smell of bruised lemon peel, and others. None of our woodland berries are fit to eat, but many are beautiful to look at, especially the scarlet round berries of the tough and unbreakable supple-jack, and the brick red fruit of the scented kaiwhiria.

With the colder weather the kingfishers are once more coming into the gardens and about the lawns. Their brilliant colours flash at each dip of their undulating flight, and their harsh cries are again to be heard round the margin of the lake. The cuckoos have left us for the warmer suns of Australia and the islands of the South Pacific. The tui, however, is musical in the bush, and in the chiller mornings of March, as well as in the warm dawns of November, his liquid notes are early to be heard.

The lengthening nights of March are musical too with the trilling and singing of the black cricket. Sometimes the Maori children catch these insects; under a tumbler or glass they sing uninterruptedly. The black cricket is a native of Fiji, I believe, and has probably come over in cases of oranges and bananas. At any rate these insects do not hatch till the full heat of summer has warmed the earth, and are seldom heard before early autumn. I do not remember having heard them out of the North Island. They are to be seen most plentifully when the sun comes out after warm rain, and in hot still nights, when a breeze holds from the north, the air is quite full of their pleasant cheerful music.

In our northern autumn the continuous shrilling and trilling of these insects is quite a feature in the season. I am sorry to say I know very little of their life habits. I have found them, however, year after year inhabiting the same natural holes in hill-sides. They die upon the first approach of real cold, and the frosts bring a new silence to the winter nights.

It is about this time of year too that the wild pigs begin

to give up eating the grass, and grub up the turf in search of worms and succulent roots. Among the tall fern their lairs are very noticeable from the brown hues of the uprooted bracken. Usually when detected pigs escape as quickly as possible, but sometimes coming suddenly on a couple of boars with no cover near, I have known them show fight to a horseman. When, as sometimes happens, twenty or twenty-five wild pigs are travelling in a mob, they will round up and face the dogs, the leader charging gallantly and the rest following him with a terrible and ferocious grunting. In spring the old roving boars are a great trouble, following the ewes and devouring the new-born lambs. Bacon and hams cured from wild pigs is excellent, indeed, after being accustomed to it none other seems palatable. It is not so fat as sty-fed pork, and very white and tender.

During March we have had a few dry windy days and took full advantage of them for burning grass and scrub. It is curious how the pericarps of the manuka open after fire, and no doubt this habit helps the shrub, for the seed immediately falls on to the black ashes beneath. The manuka in this is like some of the Australian forest trees, whose seeds only germinate freely after a forest fire. After burning the fern on the run, directly the primrose smoke of the flaming ridges has cleared away, the lazy harriers may be seen sailing along looking out for burnt mice and lizards. For some mysterious reason the old natives were horribly afraid of these latter animals. The avenging deity was thought of by them as a lizard. Some writers have imagined that their terror of this harmless creature was the remnant of some story handed down from an earlier race and founded on the recollection of some real monster.

The green lizard is a beautiful little fellow, the tints pure and soft; he is very lithe, too, and active in his movements. When detected on the bole of a tree, like a squirrel he will climb or lie motionless, always on the side away from his fancied foe. Lizards are very courageous, showing fight, and snapping their mouths like the shutting of a pair of scissors, or the chapping of two stones together. They, like their brown cousins, love to bask in the sun. One of the latter I have sometimes frightened away from the sunny mouth of his retreat half a dozen times before he ceased to reappear.

In the garden the flowers are fast failing, the heavy dews lie from morning to night in the shaded valleys, and an autumnal tint of duller green reigns over bush and grass and fern.

Tutira Lake, Napier, New Zealand. H. GUTHRIE-SMITH.

MRS. BRIGHTWEN ON "WILD NATURE."

[MR. FISHER UNWIN has brought out, at the price of a shilling, a very pleasant little volume—*Good Reading about Many Books*. The books are those published by himself, and if this appear to some a glorified form of advertisement, they will not deny its interest, for the authors themselves have for the most part supplied the information contained in the volume.

The interest, to us, centres in the account, given by one of our most valued contributors, of two books* which have done as much as any to advance the principles which the Selborne Society was established to promote. We feel, therefore, that

E. Brightwen

our readers will be glad to have this simple, unaffected narrative transferred to our pages, and the kindness of the publisher allows us to reproduce the portrait which accompanies it.—ED. *N.N.*]

IT was not until late in life that it occurred to me to put down in literary form the observations which a long devotion to nature and a humble, persevering study of it had inspired. I have always had a singular love of animals and birds, and a certain skill, I suppose, in persuading

* *Wild Nature Won by Kindness*, and *More About Wild Nature*.

their fluttering hearts to beat less and less wildly in response to affection. Success in taming wild creatures arises, I believe, not so much from inborn gift as from a carefully cultivated habit of extreme gentleness and quietude. Almost every living thing will yield its affection to those who supply it with suitable food and treat it with unvarying kindness.

Desiring to secure for young people a portion of the deep happiness which I had gained by obtaining the confidence and love of bird and beast, I began to jot down notes of my own experience, with no higher literary ambition than to be perfectly truthful in my narration. One after another desired to hear what I had seen and known; many of my friends became anxious to emulate my little victories and essay my methods. Thus, by degrees the sheaf of my small chapters, the humble annals of my pets, attained the limits of a volume, and I was persuaded to make my first venture in authorship. I have already said in the preface to a later work, and I can only repeat here, that no one in the world of letters can have been more surprised than I was at the response which my modest appeal received. But I have no illusions of vanity. I know that if my books have met with thousands of readers it depends upon no merit of style or form in my simple writing, but is a consequence of a sincere appeal to that innate love of the animal world—too often, alas! obscured by ignorance—which exists in almost every human being. My chronicles of the life of birds and beasts have had but one feature to recommend them, their absolute fidelity to fact as it has come under my own observation.

Thus I came to write my first book; and if I am to say where I wrote it, then, in a large rambling house, quite close to London, but buried in gardens and woods that themselves are surrounded by a wild and sequestered common. Under a tulip-tree upon my lawn, in the flowery meadows that descend to my little lilied lake, within a secret sanctum that the branches of my old fir-trees darken, under the yew-tree where my nuthatches flit and my squirrels chatter, in a home of deep peace, though its blue sky southwards is sometimes brownish with the nearness to London, these pages were written and tremulously sent forth to a world of unknown friends.

ELIZA BRIGHTWEN.

Peafowls (p. 17).—All peafowls are "black shouldered." The cocks are particularly rich in colour, and the shoulder a black-blue; the hens are a faint grey, almost white, with brown necks. There is an account, I believe, of them in the *Monograph of the Phasianidæ*, by D. G. Elliot, which I have not by me. They have been supposed to be a separate species—from the extreme difference of the sexes—but appear in most unaccountable manner, as if only "sports." I believe my late father was the first to draw attention to them some fifty years ago, since which we have always kept them. They are rare, owing, I fancy, to people not liking the hens, which, however, seem to us to be elegant, as well as a most curious freak of nature.

Northrepps. RICHARD GURNEY.

NOTES ON LONDON BIRDS IN 1894.

THE first remark in my notebook for 1894 is "New Year's Day: thrushes singing in Kensington Gardens." On January 10 I watched numbers of black-headed gulls floating down the Thames at the foot of Temple Gardens on blocks of snow, and saw an old great black-backed gull flying over the water. This is the first time I have seen a bird of this species in London, but there was no mistaking him, as he came quite close. When I first saw him some distance off he looked so enormous that for a moment I thought he was a heron. In former days the great black-backed gull used to nest at the mouth of the Thames, but it has long ceased to do so.

During 1893 the most remarkable fact with regard to London birds was the return of the rooks to Kensington Gardens (see NATURE NOTES, 1894, p. 32); in 1894 we had an extraordinary visitation of sea-gulls.

From the beginning of the last week in January till about the middle of March, numbers of black-headed gulls were to be seen on the Serpentine and Long Water. On February 22 and 23 the water was frozen, and most of them left us temporarily—no doubt to look for food elsewhere; but on Saturday, February 24, there was a thaw, and a long row of about sixty gulls might be seen standing at the edge of the ice. During the next two days there were at least a hundred and fifty gulls to be seen, but from this time onwards their numbers diminished, till about March 20, when they had nearly all disappeared. Of all these birds I only saw one or two which were not of the black-headed species, and they were apparently kittiwakes. On Friday, February 15, I noticed the first black-headed gull, which had acquired the black (or rather brown) face, and by the 20th many of them were in complete spring dress.

On March 3 a blackbird began to sing, and continued to do so more or less regularly from this date onwards; and I heard the first perfect chaffinch's song sung by a bird in Lincoln's Inn Fields, where chaffinches are by no means common. A missel thrush was singing near the Round Pond on March 18, and I noticed a pied wagtail there on the same day.

The first spring migrants to arrive were the willow wrens; they were singing merrily in Kensington Gardens on the evening of April 7. I had heard them and some tree pipits a few hours previously in Richmond Park. About this time one of the crows appeared to be sitting on the nest on the north side of the Long Water, but she did not continue to do so long, and I do not believe that any young were hatched this season.

The first swallow I saw was flying over the Serpentine on April 18, and on the following day a reed warbler was singing by the water in Kensington Gardens.

I noticed a goldfinch in Hyde Park on April 28, in exactly the same spot as I had seen one last year.

During the first half of May various birds passed through London. Some sedge warblers took up their abode on the island in the Serpentine on the 3rd, but only remained for about a week. I heard a blackcap on the 6th, and on the 9th I observed a whinchat and some sand martins, and my sister saw several house martins and a pair of common sandpipers by the Long Water. Spotted flycatchers appeared on May 11, and a lesser whitethroat was heard on the 18th. None of these spring visitors, however, stayed with us except the flycatchers, several pairs of which remained as usual to nest in Kensington Gardens.

For the first time for many years I spent August in town, and saw a good many of these flycatchers up till about the end of the third week, not only in Kensington Gardens and Hyde Park, but also in the Green Park, within a few feet of Piccadilly. When I started for my holiday at the end of the month they had almost all disappeared. In August I also saw one or two willow wrens again, but where they had come from I cannot say.

On October 2, just after my return to town, several black-headed gulls re-appeared on the Serpentine; with the exception of an apparently adult bird which paid us a visit in July, I had not seen one there since they left in spring, but throughout the autumn, whenever the weather was boisterous, a few made their appearance.

Swallows passed over London in October in small parties, nearly always making their way south; and during November and December cold and stormy weather was generally preceded by flocks of larks, which seemed almost invariably to come from the east.

My last note of interest for the year is that a heron paid the Long Water a visit on December 21.

I have referred above to the return of the rooks to Kensington Gardens, in 1893, but it is a very curious fact that, having tried the trees by Kensington Palace with apparently much success for one year, they should have deserted the rookery in 1894. Several of the birds were constantly to be seen in the neighbourhood of the old nests, but I have been unable to ascertain, either from my own observations or from numerous inquiries of others, that a single nest was occupied. Moreover, it is extremely doubtful whether any of the nests in Connaught Square were inhabited. There are always numbers of rooks about the parks, and it is to be hoped that they will return to their former haunts this year.

A. Holte Macpherson.

"**Natural History of Selborne.**"—Gilbert White's autograph manuscript of his *Natural History of Selborne* will be offered for sale by auction by Messrs. Sotheby, Wilkinson, and Hodge during the coming season. It has been in the possession of the White family ever since the author's death, and there are portions of the letters that have not been published.

DEAN BUCKLAND.*

ILLIAM BUCKLAND was born at Axminster in 1784, and died in his rectory at Islip in 1856. The seventy-two years of his life cover the story of the science of geology. Escaping from the hands of the Vulcanists and the Neptunists when he was a youth, it made a new start on the firm foundation just laid by William Smith—"Strata Smith," as he was familiarly called—a civil engineer, who in the prosecution of his professional work determined the succession of strata over a large part of England, and discovered that their age, wherever found, could be determined by the fossils they contained. Stratigraphy and palæontology ceased to be subjects of speculation, and became matters of observation.

The Geological Society in these early years of the century drew together into helpful fellowship the men who laid on the foundations of "Strata Smith" the first courses of the noble science whose superstructure has been raised to an imposing height in these later years of the century. One of these men was a cheery, bustling, eloquent and humorous young man from Oxford—William Buckland, Fellow of Corpus, afterwards Reader of Mineralogy, and then Professor of Geology to the University. He was President of the Geological Society in 1825, when it received its charter. Buckland early manifested great devotion to geology, and explored England and Wales, and afterwards visiting the districts on the Continent that had been made the subjects of special study. His first important work was his exploration of the Kirkdale and Dudley caverns, and his elaborate descriptions of the bones of the tiger, bear, elephant, and other animals found in the caverns which he published in his *Reliquiæ Diluvianæ*. He tested the prevailing notion that toads could live confined in rocks, by shutting up some of these animals in cells in sandstone and limestone, and then burying the blocks under ground. His work should have put an end to such tales, but alas! a credulous public still listen to and accept stories of living toads enclosed for unknown ages in blocks of solid coal or rock.

When the British Association held at Oxford its first regular meeting, Professor Buckland was elected President, and his genial presence in the chair, and in the various sections, helped to make that meeting so great a success, in the face of much indifference as well as active opposition. His great work was his *Bridgewater Treatise*, in which geology and mineralogy were considered in reference to natural theology. He main-

* *The Life and Correspondence of William Buckland*, D.D., F.R.S., sometime Dean of Westminster, twice President of the Geological Society, and first President of the British Association. By his daughter, Mrs. Gordon. London: John Murray, 1894, 8vo., pp. 288.

tained that the physical structure of the earth testified to the universal agency throughout all time of one all-directing, all-pervading Mind, and was a witness to His unlimited power, wisdom and benevolence. It is the fashion in our day, in sympathy with prevailing theories, to decry design in nature; a wiser and more philosophical view must in time assert itself.

As Dean of Westminster, Buckland was popular and active. He carried out many improvements in the buildings committed to his charge. It is remarkable that up to his day the whole drainage of Westminster was by a foul and most unhealthy open ditch; this he converted into a closed drain, to the great gain of the health of the scholars. He was always active in some good work, and left behind him, in every position he occupied, lasting monuments of his activity. After a mysterious illness of some months, he died at Islip in 1856. It is a great satisfaction to have a trustworthy life of the Dean, and we are grateful to Mrs. Gordon for the loving service she has rendered in this memoir of her illustrious father.

WILLIAM CARRUTHERS.

"NEW LONDON."

UNDER this heading the *Daily Chronicle* has been giving a series of interesting and admirably illustrated articles on the work of the London County Council. We have no intention of entering into the relative merits of "Moderates" and "Progressives"; and by the time this issue of NATURE NOTES is circulated, London will have made up her mind to which of the rival bodies she will entrust her administration for the next three years. But Selbornians will look favourably upon the good work which the expiring Council has done for parks and open spaces, and may be glad to have a summary of the results of their stewardship. This the *Daily Chronicle* gives as follows:—

"Every Londoner knows Coleman Street, but few know or think that beyond it ran the old London Wall, and that further still lay the moor or fen which to-day we call Moorfields or Finsbury. More than three hundred and fifty years ago, when the moor was a moor indeed, it was drained, laid out, and turned into London's first public park. So it remained until the Corporation became its owners. They destroyed the park and raised Finsbury Circus in its stead! So much for London's breathing space under its old governing body. What about the public pleasure grounds of New London?

"The most crucial instance of the Council's devotion to fresh air, and the good things in the way of sport and athletic life that come from it, is its exemplary guardianship of the parks. In this respect the Council have had almost everything to do. To-day London owns as her special heritage of common ground, apart from the royal parks, 3,656 acres as against 2,650 which were her heritage six years ago. Every year on an average during the six years of the Council's administration, seven new playgrounds have been thrown open, the annual average for the last four years of the Metropolitan Board's administration being one and a

fraction. The number has been all but doubled. It has grown from forty to seventy-eight, and the cost now trembles on the verge of £100,000 a year—an increase of less than ½d. in the pound for the whole six years.

"But mere figures can give no idea of the Council's work in the parks. Even the Metropolitan Board may put something to its credit on this account. It started with one park—namely, Finsbury—which, under its rule, was the most dismal in London. The number grew inevitably, but many priceless "beauty spots" were swallowed up by the builder, and the spaces that were retained were not adequately cared for. Games were played upon them, but the cricket pitches and football grounds were ill-kept, and were allotted under no proper system. Little was done in the way of landscape gardening, and small personal thought was given to the task of organising the brief leisure hours of the workers lives.

"What a change to-day! From Hampstead to Dulwich, from Hackney to Clapham, you have a stretch of lovely playgrounds, set with every kind of pleasurable device in grass and water and flowers and trees. In Bostal Woods there is a stretch of pine wood as fine as you can discover at Bournemouth or the Black Forest, and the spot has grown to be a favourite one for the cockney picnic. You have Waterlow Park, which, thanks especially to Mr. Dickinson and the earlier labours of the Parks Committee, is—clothed in its summer dress—a vision of woodland seclusion and garden loveliness. You have Hackney Marshes, destined to become, perhaps, the finest cricket-ground in London, and, if the Council choose to make it so, a rival even of the world-famous Oval. You have seen a dangerous plague-spot like Victoria Park Cemetery, where the Council found the coffins sticking out of the rank grass, turned into a pretty recreation ground. You have six acres snatched from the builder in a densely crowded district, and re-made into Bethnal Green Gardens. You have Shoreditch with a population of, perhaps, 60,000 souls, dowered with its one open space. You have the old English garden at Brockwell Park, and you have a new source of delight to the children of the East-end in the deer that grace the enclosures at Clissold and Victoria Parks."

Since this summary was written the Council has opened a new recreation ground in Tottenham Court Road, as well as Lincoln's Inn Fields. We have reason to believe that the unsatisfactory state of the Embankment Gardens, to which we have more than once referred in these pages, will be remedied in time for the coming summer.

A BOOK OF THE ROSE.

The Book of the Rose—such is the title of a well-printed, well-bound volume, of some 340 pages, from the pen of the Rev. A. Forster-Melliar, published by Messrs. Macmillan & Co. (price 8s. 6d. net). The subject is, perhaps, too distinctly horticultural for treatment in NATURE NOTES with that fulness which, on the one hand, such a book deserves in its proper literary channel; but on the other hand is one which comes appropriately before the nature lover.

The wild roses of the country lane and the woodland hedge, those of the pretty pink chalice, or of the dainty cup of ivory and gold—these are what all lovers of natural beauty prize. *Canina* and *Arvensis* have each their charms, they are parts of the day-dreams which come to us in the train of the delights of the sleepy noon of the summer sunshine. Yet it is safe to assume that we are all sufficiently imbued with the spirit of the garden and its glory to have a strong liking for "the queen of flowers," as the garden rose, by an almost common consent, has been allowed to be called. To the eye of the discerning there is a presentation of perfectly moulded form, wedded to a richness of colour glory, peculiar to this long line of court favourites.

Thus contemplating and contrasting the simplicity and splendour of the

groups found so profusely round about us, we may fitly ask, What is the difference between nature and horticulture as applied to plant life? We have only to reflect for a moment to find an answer, which, elaborated, is *the* answer. Nature builds up a plant in a certain complete and beautiful way, preserving symmetry and balance, consistent with the characteristics of the species, stem, branches, leaves, inflorescence; untouched, save by wind and rain and sunshine, they grow up in their naturally beautiful forms in which they are found in their native habitat, in the garden of nature. But when the mind and hand of man are brought in, we find all altered, and evidence of treatment which quickly manifests itself in the development of a particular feature, to the neglect or at the expense of the remaining parts. This is brought out in the book before us: the author frankly says, the rose to him is "in most cases only as a means wherehy I may obtain glorious roses"—meaning, obviously, the blooms, and only the blooms. As a decorative plant, even, he scarcely admits the rose a place or a value!

But it is time we looked more closely at the book itself. We remember then that Mr. Melliar is writing for amateur rose growers, and under the conviction that the rose is a medium for the production of show blooms—somewhat in the sense that the modern chrysanthemum is a leafy stick, to produce, as a terminal decoration, a floral soup plate, of varied shade and pattern. After making allowance for the phases and features I have endeavoured to indicate, the book has a real value for its practical information. It gives valuable hints, the result of experience, upon various points of interest to the rose grower bent upon successful cultivation. On most matters connected with the rose Mr. Melliar displays a reliant assurance on his methods. He does not believe in a person having a rose garden to which he gives but little attention, upon which he bestows no absolute labour. He tells us, "I write for enthusiasts, for those who make a regular hobby of their roses, and think of them as fondly and almost as fully in January as in June." He goes into details of cultivation very fully, and gives a number of facts which show that the supreme gift of observation has not been lacking, but that this faculty has been rightly directed, and the facts duly registered as they came within range, have been subjected to that process of actual practice which is, after all, the crucible of true analysis.

The book is divided into fourteen chapters. It treats of history and classification, situation and soil, planting, manures, pruning, stocks, propagation, pests, glass-grown roses, exhibiting, manners and customs, selections, and a calendar of operations. The directions are always clear, though sometimes the diction might have been better if more carefully considered or corrected.

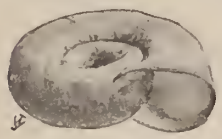
The illustrations are entirely photographic, and whilst some of them are very effective, it would have helped the artistic value of the work if other than those of the camera and "process" had found place in its pages. The book should be a popular possession amongst gardeners and rose growers, and should be found side by side with *The Rose Garden*, by William Paul, and *A Book of the Rose*, by Dean Hole, of whom Mr. Melliar is evidently an ardent admirer.

EDMUND J. BAILLIE.

SHORT NOTICES OF BOOKS.

MESSRS. BLACKIE AND SON have added the *Natural History of Selborne* to their cheap and excellent "School and Home Library," thus, it may be hoped, introducing it to a new circle of readers. We think, however, that it is to be regretted that the publishers have not introduced some illustrations, and the omission of an index is a serious drawback—there is not even a table of contents. As it is, the boy who wants to read about some particular bird or beast can only find it by turning over the pages, and it is hardly reasonable to expect him to take this trouble. The short introduction might well have been more attractive, and the insertion of footnotes, giving the generally accepted names of plants, birds, &c., and certain other particulars illustrating the text, would have been a further improvement. We are glad to welcome any new edition of *Selborne*, but we think in this case the publishers should have studied more carefully the tastes and necessities of their *clientèle*.

A Monograph of the Land and Freshwater Mollusca of the British Isles, by J. W. Taylor, F.L.S., &c., part 1, 8vo. Leeds: Taylor Bros., 1894. Price 6s. The first sixty-four pages of this long-promised work now lie before us, and if, as we have every reason to expect, the remainder be carried on in the same thorough manner, British conchologists will have no longer reason to complain that a complete treatise on the subject is a desideratum. In addition to a coloured frontispiece there are abundant illustrations in the text. The slug is the only figure on the coloured plate that leaves something to be desired; the text illustrations are not all of equal merit, but the majority are infinitely better than anything that has been done before for British shells, as the accompanying example—a variety of *Planorbis corneus*—shows. Doubtless Mr. Taylor's production will not satisfy all the specialists on the subject—what work ever did?—but then the specialists must take care of themselves. The ordinary student of British conchology will find it an indispensable, though not infallible, guide in his pursuit, whilst it cannot fail to be of interest to those also who



"Look with young wonder at the sliding snail,
Admire his eye-tipt horns and painted mail."

B. B. W.

It seems scarcely a year since we chronicled the beginning of *The Country Month by Month*, but the last of the twelve volumes is now before us, bringing to a close this excellent series. The high level which was reached in its first volume has been steadily maintained, and we are glad to speak as favourably of the work at its close as we did at its beginning. Professor Boulger and Mrs. "Owen" have worked together most satisfactorily, and have produced a valuable addition to the country house library. The publishers, Messrs. Bliss, Sands and Foster, are issuing the twelve monthly parts in four quarterly volumes, in which form they will be perhaps more suitable for reference, though as pocket companions the monthly instalments are more convenient.

We hope to notice next month Sir Robert Hunter's important pamphlet on *Footpaths and Commons, and Parish and District Councils*, which Messrs. Cassell have just issued; but will not defer stating its object, in the following extract from the introductory note:—"It is the object of this pamphlet to explain in very general terms the principles of law which govern the preservation of footpaths, road-side wastes, commons, and village greens, and to indicate the duties and powers of the newly established Councils in this connection. It is a subject of general lament, that in recent years there has been a steady flow of population from country to town. The inclosure of commons and the closing of footpaths, the destruction, so to speak, of the labourer's heritage in his own parish, effected without the slightest reference to his views, has probably had its share in bringing about a result which is now so much regretted. It may be hoped that the power recently given to the people to protect their own footpaths and commons will, if understood and exercised, do something to make the rural districts more attractive to the majority of their inhabitants."

SELBORNIANA.

Feeding the Birds.—During the late severe weather my family have been in the habit of throwing food out for the birds on a patch of gravel walk cleared of snow. Birds of many kinds—thrushes, blackbirds, starlings, chaffinches, robins, sparrows, and others—have come in great numbers to partake of the food thus provided, but a few days ago another claimant appeared, a medium-sized rat, who apparently has his head-quarters somewhere in the shrubbery. He has now appeared regularly for several days, and his presence does not apparently alarm the birds. As another novel experience at this season of the year I may mention that yesterday morning, with the thermometer at about 25°, I saw two red squirrels running about under a beech-tree scratching away the snow, which

was an inch or two deep, looking, I suppose, for beechmast, and in every way as lively as if it were July instead of January.

Chipstead, Kent. G.

Gold Fish (p. 37).—Selbornians should certainly hold it execrable to keep gold, or any other fish without a due supply of food, for although they obtain their oxygen from the water, they can obtain nothing from it to supply the waste of tissue that necessarily goes on in all animals. But the food should be used sparingly, and never in larger quantities than is required by the immediate appetites of the inhabitants of the aquarium, unless it is of such a nature, *i.e.*, certain animals, that the environment of the aquarium is compatible with their health and happiness until they are required as food by their larger fellow inhabitants. The little worm found in the moss which grows on the stones at the bottom of most streams, is of this nature, and several water insects: but if bread, or other readily decomposable food, be used it will soon foul the water. Water weeds of some sort should always be kept in the aquarium, as fish, in common with all animals, give off the poisonous gas, carbonic acid, which will assuredly end the life of any that has its oxygen-supplying medium charged with it; whereas plants, by their leaves, through the agency of sunlight, split up the carbonic acid gas into its elements, carbon and oxygen, retaining the former for their own use and giving off the latter.

Cudham, Kent. W. TOTHILL.

Birds at Windows.—It would be interesting to know if those who are accustomed to feed the birds at their windows in the winter have noticed an unusual absence of chaffinches this year. Even during the severe weather of the first half of January I did not myself see a single chaffinch. At the end of the fortnight a hen came, and a cock a little later, but they did not remain. In previous years they have not failed to come as soon as food was put out for them. Is it that this pretty little bird is "becoming extinct," or is it that they have "gone south" in larger numbers than usual, in expectation of the severe weather? On my window outside is a flower box full of earth, and on the earth I have put the crumbs, potato, scraps of meat, &c., which have been appreciated by robins, blue tits, great tits, a wren, hedge sparrows, and house sparrows. One robin has almost made his home upon the box. When I come down in the morning he is almost sure to be there, or else waiting patiently for his breakfast on a laurustinus tree close to the window; and often long after sunset, when almost too dark to see him, he is still there. He is an interesting little fellow, though he does, it is true, sometimes seem to imagine he has sole right to box, crumbs and all, and I have seen him drive off as many as three or four sparrows at once. In the early winter he would quickly snatch a few crumbs and then be off at the slightest alarm, but he has now become tame enough to often take his meal leisurely while I am standing close to the window inside. It is amusing to see him endeavour to imitate the tits in his attempts to cling to a small piece of fat which I hung on a tree near the window. The tits cling to the bottom of the fat, back downwards, even when it swings violently or whirls round and round in a strong wind. This feat, however, the robin cannot accomplish, but endeavours to alight on top of it. Failing to do this he flutters in the air by the side of it, giving a vigorous peck at it, but he is unable to retain that position for long. I have seen him at least eight times make the attempt upon the fat in the course of a minute or two, but without success, even when there is no wind. He now appears to have abandoned his efforts altogether. It is worthy of note that before he observed the action of the tits he never once, to my knowledge, made the slightest attempt to cling to the fat, though it had been hanging there several days before the tits came to it, and though he was often on the tree within a few feet of it. The sparrows never attempt to touch the fat while it hangs on the tree, but if it is tied closely to a branch they are all at it at once. One wonders what most birds can possibly find to eat with snow on the ground for days several inches in depth.

It seems strange that the starling, though so "domestic" a bird in many respects, spending so much of his time on our house tops and chimneys, will never come to the window for food, though he will often take it readily when thrown on the grass near the house. The blackbird and thrush will sometimes venture, but the starling I have never seen. Yet how often, at almost all seasons of the year, "He my chimney for a speaking trumpet takes," sending down in his remarkably

clever way—so perfectly sometimes as to deceive for the moment even the most experienced ear—the notes or cries of blackbird, missel thrush, yellowhammer, greenfinch, tom-tit, swallow, swift, sparrow, jay, woodpecker, jackdaw, lapwing, seagull, &c. But what a rare gift, generally speaking, it seems to be—that of being able to detect in the starling's "noises" the voices of so many of our birds, large and small. It certainly is not the fault of the starling. The chief reason, I suppose, is that there is so little knowledge of the notes and cries of our birds. The starling that frequents my bedroom chimney[1] also imitates geese, ducks, the crow of a cock, the croak of a frog, the bark of a dog, the cry of a cat, the mason's hammer, the creaking of a gate and of a pump handle, the postman's whistle, and many other things. He has often made me think, for the moment, that the postman was coming along the road. It is, however, in the reproduction of the voices of other birds that the starling best excels, often bringing them back to us in imagination, when they have perhaps long been silent, or have left our shores for far-off lands, as though he would remind us, with the falling leaves of autumn, and even in the frosts of winter, that "the birds will sing again.'

Caerleon. C. E. C.

Another Kingfisher shot!—A sportsman (?) in search of gulls shot a kingfisher in Plumstead Marshes at the end of January. Two or three have been seen there lately. This seems very near a populous district for so rare a bird and perhaps stress of weather has something to do with their appearance. This specimen is, of course, to be stuffed, and I am afraid shooters will soon drive the beautiful creatures to more remote districts.

A. C. Elsdon.

The "Aigrette" (p. 37).—Is it worth while pointing out to Miss S. I. Maude, that the "aigrette" is not pulled from the living bird's *head*, but is one of its *dorsal* feathers? F. W. A.

Wild Life on the River Thames.—Alderman Burt, the representative of the Surrey County Council on the Board of the Thames Conservancy, has intimated his willingness to lay before the Board any proposals for the safeguarding of the life of wild birds or the protection of wild plants which may be sent to him by any of the branches or members of the Selborne Society in the Thames Valley. His address is Hill Side House, Richmond.

J. Allen.

The Twelfth Annual Report of the Metropolitan Public Gardens Association gives a satisfactory summary of the work done during the past year. The Association has co-operated with the London County Council in many of the undertakings referred to on pp. 52, 53, and is engaged in promoting schemes for the acquirement of open spaces in many densely-populated localities in the south-east and east of London. Since 1883 the Association "has been able to lay out 62 gardens and 20 play-grounds, covering an area of 112 acres, at a cost of £38,000; to plant some 3,000 trees, and to place about 3,000 seats in the streets and public gardens of the metropolis." Subscriptions towards the development of the work will be welcomed by the Secretary, Mr. Basil Holmes, 83, Lancaster Gate, W.

NATURAL HISTORY NOTES AND QUERIES.

Where are the Tits gone?—For years I have fed these merry little fellows with lard and bones, and such inserted in the crannies of an old pollard, placed on the lawn, close to the dining-room window. They came year after year through the winter by dozens, three or four at a time, continuously throughout the day. A very pretty and interesting sight their lively antics afforded. Two pairs of nuthatches also attended with the greatest regularity, and besides the nuts fixed in the interstices of the bark, shared with the tits in the delicacies specially prepared for them. Nuthatches are the most restless of birds, more so even than the tits. They run incessantly, and with equal ease, up and down the bark, tail or head first as happens, and appearing first on one side of the trunk then on the other, with such rapidity as to give the notion of two or three pairs

when one only is present—indeed, though two pairs came regularly to their meals one only would be on the stump at the same time, each politely retiring in turn. But, to repeat my question, *where* are they now, and where are the tits? Not one of either kind has appeared this year, and the great stump is deserted, though all the delicacies of the season—lard, suet, even butter—is provided in ample quantity. X

Late Singing of Thrushes (p. 17).—One of your correspondents speaks of having heard a thrush as late as November 4. I was still more favoured, for the first Christmas carol I heard was from the throat of a thrush (not a missel) singing with vigour, though not quite in full song, on the morning of December 24, a short distance from my door, the temperature being 50°. And it may perhaps be worth mention that on the 26th, a meat fly (not half dormant) was buzzing about my open window—sounds, both of them (buzzing and singing), that one hardly expects to hear in old England at Christmas time.

Caerleon, Monmouth. C. E. C.

The Chaffinch.—I should be glad if any readers who happen to have observed and recorded the exact date of the beginning of the chaffinch's song this year, would kindly send me a note of their record, mentioning also, if possible, the character of the weather at the time. My experience in Oxford has been peculiar so far. I caught the song first on January 20, a very warm, soft day, and the earliest date by ten days of which I have any record here. Then came sudden cold, which has lasted with varying intensity up to the present date, February 4. This severe weather put an end to the song, but not to the pairing, of which I saw something among the chaffinches as well as other birds almost every morning. To-day the chaffinches have begun to sing again, in spite of an intensely cold east wind; but I have as yet only heard them at one spot, which is always a favourite of the birds in winter. I may add that on January 20, a brimstone butterfly came out of its chrysalis in the garden of a friend here, making a very serious mistake, which has no doubt cost it its life.

W. Warde Fowler.

A Fight in the Air.—Some years ago in the month of June, while on a visit to Keswick, my wife, son, and I went by rail to Bassenthwaite. The weather was perfect, and though the lake is not nearly so pretty as Derwentwater, nor its surroundings so grand, we found several pleasant walks, one especially, through a beautiful wood, which led to the higher ground, and thus gave us a glorious view up the valley towards Cockermouth. Very soon we noticed a sparrow-hawk poised in mid-air; suddenly he swept down to a tree, but evidently failed to strike his intended victim. He then took up his original position and made two further attempts to secure his midday repast, but in each case was unsuccessful, so he flew away to the wood.

Later on my son and I started to walk round the head of the lake. We had not gone far before we became aware of a great combat in the air between two lapwings and a sparrow hawk (probably the one we had seen previously); in an instant we were keenly interested and almost excited. The three birds were about 150 or 200 yards from the ground, and the order of battle seemed something like this—one lapwing to keep flying a few yards above the hawk, the other a similar distance below him; suddenly the one above would descend and strike the hawk on its back with all his force of beak, body, wings, and feet; before he could recover from this blow the other bird flew up and gave the hawk a great stroke on one side; this was repeated several times. Then the mode of attack changed, and both lapwings struck the hawk at the same instant—one from above, the other from below. The effect of this manœuvre was quite clear—the hawk was baffled and stunned by the concussion, and visibly sunk several yards before he regained the power of flight, and almost instantly the two birds attacked him as at first, but more rapidly and viciously, for now they screamed wildly, but kept on buffeting the hawk without a moment's rest, only that both the lapwings took a wider flight, the result being to bring more force, as each blow seemed to drive the hawk several yards out of his position. These tactics continued for some time; then, as if with a

perfect understanding, the two birds struck the hawk at the same moment from above and below, with terrific force, which knocked him clean out of the fight, for he sank as when descending on his prey, but really to get clear of his tormentors; and, having done so, he never stopped until he had reached the friendly shelter of the wood. As near as we could tell this aerial fight occupied about ten or twelve minutes, and left an impression on our minds never to be forgotten.

Sutton, Surrey. JAMES SLATER.

Lemmings.—I should be glad if anyone can tell me the dates of the migrations of lemmings during this century, and to what books reference should be made for information on these animals. The *Naturalist in Norway* gives 1863 as the last year of migration, but one imagines there must have been others since then. This book also does not give as full an account of the lemmings as one would wish.

R. W.

TO CORRESPONDENTS.

We must again call the attention of our correspondents to the rules given below, the continual infringement of which causes the loss of time, trouble, and temper.

I. C. G.—Mr. R. I. Pocock recommends *The Structure and Habits of Spiders*, by J. H. Emerton (Boston, Cassino, 1883), as a small, cheap, and easy book on the subject. Please read Rule 4.

C. J. M.—We cannot find room for the lines. Please read Rule 4.

A. H.—We have forwarded two letters from you to their proper quarter. Please read Rule 5.

E. A.—See Rule 4.

C. E. C.—Read the chapter on "The Songs of Birds" in Mr. Warde Fowler's *Summer Studies of Birds and Books;* and his notice of *Wood Notes Wild* in NATURE NOTES for 1893, p. 147.

C. G. O.—We do not think the inference is justified. Please read Rule 4.

T. P.—See Rule 1.

H. W.—See Rule 5.

G. C. G.—See Rule 4.

E. L.—*Our Animal Friends* is published at 10, East 22nd Street, New York.

We must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

SELBORNE SOCIETY NOTICES.

Humanitarian League.—At the request of the League the Council elected two delegates, Messrs. Edwards and Martin, to attend the National Humanitarian Conference at St. Martin's Hall on February 28 and March 1.

Council Election. Field Club Secretaryship and Rambles.—The Council elected Miss Temple to fill a vacancy on the Board, and this lady has since been appointed Hon. Secretary of the Field Club, in place of Mr. T. A. Dymes, resigned. The Council passed a hearty vote of thanks to Mr. Dymes for his work in connection with the Club last year. The programme for the Session, April to June, is now under arrangement; the full particulars for April will appear in that issue. The first Ramble will be on April 6—Chingford to Woodford through the Forest, returning to Hale End. Meet at Chingford station 3.10 p.m. (Liverpool Street 2.33 p.m.) Return day ticket 1s. A paper will be read after tea.

Council, Committee and Field Club Meetings.—The next meetings of the Council take place on March 5 and April 2, at 5.30. The Magazine and Leaflet Committee meets on March 20 and April 17, at 5.30, and the Finance Committee meets at 6.30 p.m. same evenings. The Field Club Committee meets on March 5, at 6.30.

NEWS FROM THE BRANCHES.

Birmingham.—The Council learn with much regret the resignation of Mrs. Windle, the Hon. Secretary of the Branch, and they tender her their best thanks for her past services. Miss D. Sturge has kindly undertaken the Hon. Secretaryship; her address is Ker Yoes, Harborne, near Birmingham. In connection with the above Branch the Council have received an excellent report of the Branch's work for the past year. They congratulate them on the state of their finances, which are extremely satisfactory.

Clapton (Lower Lea Valley).—The usual Social Evening of this Branch took place on February 4, when various papers were read and the Vice-President, Mr. F. Coles, gave a very interesting exhibition with his microscope. Other friends contributed music, and a hearty vote of thanks to the helpers concluded the evening.

Richmond (Lower Thames Valley).—On January 31, Mrs. D. Roberts invited many members of the Branch to a Conversazione, at which addresses were delivered on local Selbornian subjects by Alderman Burt, Mr. T. F. Wakefield, Mr. F. N. Dimbleby, and the Secretaries, Messrs. Allen and Jones. Several new members joined, and a very pleasant evening was passed.

Southgate.—Our "Selborne" lecturer, Mr. E. A. Martin, gave his interesting lecture on "Gilbert White and the Village of Selborne," to a very appreciative audience on the 21st ult. A new feature of Mr. Martin's lecture was the reading of eulogistic letters of Gilbert White from the Duke of Argyll, Sir Edwin Arnold, and others. The usual unanimous vote was tendered to the lecturer.

New Branches.—The Council hope that at Guildford and in the neighbourhood of Lewes, new Branches will shortly be formed. Members and friends in these districts willing to assist can obtain further particulars on application (for Guildford), to A. E. Moon, Esq., Guildford Natural History and Microscopical Society, 36, High Street, Guildford, and for Lewes district to H. H. Ebrall, Esq., 37, High Street, Southover, Lewes.

The list of Branch contributions is held over till next month.

Notices for this page must be received not later than March 15 to appear in April issue.

Nature Notes:

The Selborne Society's Magazine.

No. 64. APRIL, 1895. Vol. VI.

MISS BENSON AND HER PETS.*

SINCE Mrs. Brightwen's *Wild Nature won by Kindness* was issued in 1890, there has appeared, I think, no fresher or more independent collection of stories about animals than that which Miss Benson has just published under the title of *Subject to Vanity*. Miss Benson is a delicate student of animal psychology, and differentiates between individuals of the same species with a *finesse* which appears to me to be her best quality, as an observer. In saying this, I mean to distinguish between her grasp of character in animals and her conception of the forms of expression which that character takes. She has much humour, and a gift for amusing us by oddities of diction; she applies this humour largely to her pets, and she wins our laughter with ease. But I do not think that, in this direction, she always avoids what we may call the Landseer fallacy, the trick of making animals vastly entertaining by representing them as travesties of ourselves. This is a gift, of a kind, but one which alarms the naturalist; it is therefore in the less amusing but sounder capacity of a fine observer of individual character that we specially applaud her. It is easy to be funny about the conjectured emotions of guinea-pigs or canaries; it is hard, it needs a very special eye, to detect and define the personal qualities which distinguish one canary or guinea-pig from another.

It is in dealing with domesticated animals, of course, that these distinctions of individual character are most plainly seen. More than this, it is probably the conditions of confinement, the cessation of the primal savage anxieties with regard to food,

* *Subject to Vanity*, by Margaret Benson. Methuen & Co. Price 3s. 6d.

shelter from the weather and protection from foes, which give character its opportunity for development. In the direct struggle for life, no place can be found for more than slight deviations from the normal. But let food be artificially and copiously provided, and let that danger of being slain, which haunts every moment of a wild creature's life, be removed, and the species has the occasion offered it of extending its varieties of habit as widely as it chooses. The gift which we specially applaud in Miss Benson, is one which is best exercised on domesticated animals, and accordingly, it is of these that she writes with most confidence. Her analysis of the emotions of cats is really valuable; for instance, she indicates to a nicety the shades of feeling which pass over these sensitive and superficial beings, so hysterical, so impulsive and yet essentially so obtuse; and the pages in which she records the volatile action of maternity on the character of the beautiful Persis are written with the pen of one who possesses a mastery of the feline heart. Miss Benson positively suggests a possible new departure, a species of fiction in which real animals, not little human people masquerading in an animal dress, shall be the characters. Something of this kind was dimly foreshadowed in the eighteenth century, as by Henry Coventry in his *Pompey the Little*, but the eighteenth century had not pushed animal psychology nearly far enough to make the experiment a success.

When Miss Benson leaves the domesticated animal, her observation remains as keen as ever, but she is unable to explain what she sees. I have already mentioned Mrs. Brightwen's name; it is that of an analyst of character less brilliant than Miss Benson, but more scientifically trained and perhaps of a quicker practical instinct. With Mrs. Brightwen's well-known study of the habits of the water-shrew may be compared this clever and exact, but abrupt account of Miss Benson's adventure with a similar animal. (The individualising habit of Miss Benson's mind is shown by the fact that she could not be thrown into the society of a solitary shrew for half a day, without giving him a definite name.)

"What was it, I wonder, that killed Maximilianus? Maximilianus was a very small shrew, and we found him running about the garden; he was just about as long as his name. He was not the least frightened, and we carried him about for half a day, but we found nothing he could eat, until at last we came upon a very large, fat, orange-coloured centipede. Maximilianus seized upon this with the utmost delight, began it vigorously at one end, and ate it up like a radish as far as the middle, then he died."

This mystery of the death of creatures who seem to have no cause to die, weighs heavily upon Miss Benson. She has been very unfortunate with her captures. The field and harvest-mice, the hoopoe, the wild cygnets—they all passed away untimely, without assigning any satisfactory reason for

their decease. The cygnets, it is true, were said to have died of being promenaded too much at a tender age, by their vain-glorious parents, but this strikes one as a very questionable cause of dissolution. It would hardly pass muster with a careful coroner; the melancholy fact seems to be that in a majority of cases, the very propinquity and touch, perhaps even the odour of a human being, is fatal to the coy wild forms of nature. We succeed, by gentle movements and judicious care, in removing the little creature's fear; it no longer shudders at our approach, and we think that all danger is past. But our presence has subtly poisoned it, and it dies, of no tangible hurt and in no paroxysm of terror, but of the blight and malady of mankind. When we have outgrown the childish delight of handling and caressing a captured wild creature, we may solve this difficulty of its tendency to expire abruptly, and, led to it by slow degrees, the wild animals may even grow to endure our presence, as their domesticated brethren have contrived to do. But the truth is, we are as yet only on the threshold of discovery as to our relations with beasts and birds. We have not learned the elements of their language or the simplest secrets of their hearts. Meanwhile, their less frequent species are melting before us, and we find ourselves wakening to the importance of comprehending and protecting them at the very moment when it seems to have become too late to hope for their preservation. If the human race could only have arrived more rapidly at a sense of the value of rare living creatures, and more slowly at the perfection of weapons of attack, it would have been a happy thing for the humane student of zoology.

New stories of dogs are always welcome, and Miss Benson tells charmingly the tale of Watch, a silky collie, who had all the arts and graces of his kind. His name was a difficulty to him, the word meaning, to his bewilderment, other things beside himself. He was fond of going to prayers in chapel, and on one memorable occasion, when the twenty-sixth chapter of St. Matthew was being read, "Watch got more and more excited as he heard his own name repeated more and more emphatically, until at the final, 'I say unto all, *watch*,' he ran eagerly into the middle—such exciting, personal prayers!" Watch disliked other dogs of all sorts, but was highly indulgent to cats and guinea-pigs. Speaking of guinea-pigs, Miss Benson has given to these prolific conies an attention which should entitle her to the presidency of that obscure but influential society which exists, so I have been told, for the encouragement of the guinea-pig and its protection against evil tongues. Her passionate individualism has led her to try and differentiate between the specimens of that seething vitality, to which she tries, with an energy that faints in the fourth generation, to give positive names. To make a chart of the Milky Way seems a trifling enterprise by the side of drawing up a family tree of guinea-pigs, but Miss Benson is an intrepid genealogist. She is an exact observer, too, as we

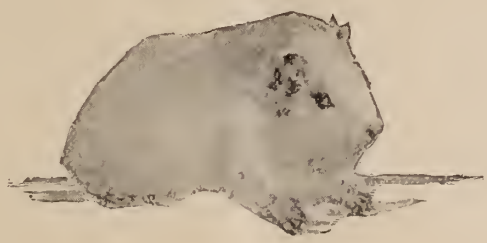
know, and she has recognised that guinea-pigs have more than one noise—"three voices are there," Wordsworth might have put it—a whistle to express hunger, a mumbling or chanting, usually known as "guinea-pig noise," when they are contented, and a sound of the gnashing of teeth to convey anger. The rapid increase of the nation, and the necessity of naming and distinguishing each little swine, soon grew to be a serious strain on Miss Benson's mental powers. A sudden outburst of crime in the sty, when Brastias murdered one of the seven new-born infants of Atahualfa before Miss Benson had found time to name it, could not be considered a relief. Each family came sooner than the last and was larger. The horrible knot was at length cut. The place was overrun with rats, and rat-catchers were sent for. These professionals were arranging their plans

JACK THE CANARY.

when it was suddenly noticed that the dogs were not with them. At the same time a cry was heard from the dwellings of the conies, and it was immediately found that the good dogs had fallen into an excess of zeal, and that all the guinea-pigs but two were dead.

It is the expression of a personal feeling of no value, but I have to say that I fail to follow Miss Benson with enthusiasm in her cult of the canary. This bird seems to me to be among feathered folk what the parsnip is among vegetables; it is the last expression of genteel insipidity, of lower middle-class refinement. One knows the sort of "small gentlemanly residence" that a cock canary would purchase if he could; fancy shrinks from imagining the boudoir of a hen canary; I feel convinced

that one might with ease select the books and pictures which would appeal to canaries, and there is more than one popular divine whose volumes would always adorn the seed-room table. Budgerrygars, in whom Miss Benson takes a deeply sentimental interest, are a little more to my mind. Their coats are much prettier, and are, indeed, exquisite by the side of the canary's mawkish yellow. But the budgerrygars are wanting in taste. Their sentimental public fondlings, interesting at first, grow shocking by their prolongation. They remind one of amorous couples on a bank holiday, or of an under-bred minor poet maundering about his connubial felicity. One has a strange idea that the budgerrygar, when it grows a little older, may obtain some employment in the city, may live in the suburbs, and may turn into a canary.



THE GUINEA-PIG.

From Miss Benson's delightful book I must not part without a word of praise for the illustrations, some of which are exceedingly happy.* No one, I think, has ever drawn a better guinea-pig (pp. 123, 126), and her field-mouse, standing on its hind-legs and grasping the bowl of a spoon with its paws while it greedily imbibes, is admirably life-like. Her cats are nicely drawn and fluffy, but nothing will induce me to believe that Pasht had so long a tail (p. 32). Of Jack, the canary, on p. 85, I will only say that it undoes, by its bold and obviously truthful portraiture, all that Miss Benson, in her partiality, has been trying to perform by her text. Intellect—in that eye? Heart—in that tail? Never shall it be admitted. We advise all lovers of excellent stories about animals to buy *Subject to Vanity*, and to decide for themselves.

EDMUND GOSSE.

* Two are here reproduced by the courtesy of the publishers.

WHEN SPRING AND THE THROSTLE COME BACK FROM THE SEA.

March is here with her sound of brooks,
March is come with her clamour of rooks,
Bleating of sheep and lowing of herds,
Cry of the raven and twitter of birds ;
But mellower far over lake, over lea,
Is the flute of the throstle come back from the sea.

"Sweet, sweet, sweet!" how her melody thrills,
Where the sun looks over the snow-crowned hills,
"Sweet, sweet, sweet!" how her voice prevails
When the sun dies out of the purple dales.
"Sweet!" when the star hangs bright in the tree,
Is the song of the throstle come back from the sea.

Soft are the whispers of shore-ward dunes
Where the thrush in the winter nursed her tunes,
Loud is the chanting of wave and wind
And ocean-harmonies left behind.
But dearer than all is the music for me,
When Spring and the Throstle come back from the sea.

H. D. Rawnsley.

THE CLOTHES MOTH.

WE are all of us but too familiar with the ravages of the common "Clothes Moth," ever busy fretting both our garments and our tempers. We find our cherished furs and woollens—which we fondly imagined we had put away so carefully—utterly ruined by what we emphatically call *the* moth, as if but one species really existed, and we refuse it our interest and our sympathy. When we find some piece of material containing moth-larvæ, we are usually too intent upon destroying them to bestow much thought upon the habits of the creature, but I have discovered of late that even these moths are so curious as to be well worth a little careful study.

I will relate how I came to know something about the life-history of some of the *Tineæ*, the name by which these insects are known.

Many years ago a friend gave me some beautiful grey feathers of birds which he had obtained during a voyage up the Nile. The majority of these feathers had been arranged in my feather-books, but a few remained in a drawer, and on examining them after a lapse of time I found they were shredded and perforated

till only fragments were left. Quantities of little grey cases or cocoons showed that what had gained access to the feathers was moth.

As I was then specially interested in the subject of domestic natural history, the living inmates of our houses, the cases were exactly what I wished to study. Accordingly, I made a collection of them and covered them with a glass shade until I should find leisure to observe them more closely. Returning from some other occupation I found the small cases in active motion. A brown head and part of a white grub's body appeared at one end, and each insect, like the caddis worm, was dragging its house after it, and seemed able to crawl rapidly about. By gently pressing the tail-end of a cocoon I made the grub come out and leave its case behind, so that I could examine it more particularly.

The case was evidently made of shreds of the feathers on which the grub had been feeding, and was lined with fine white silk. There are understood to be about thirty-one species of the genus *Tinea* in this country; of these many, when in the larva state, inhabit fungi or rotten wood. One beautiful species is found abundantly in granaries; its larva lives upon corn, and resides in a case formed of wheat grains connected together by silken threads. Many of the species of *Tineina*, the great group to which the genus *Tinea* belongs, are leaf-miners and form those white streaks we may often see upon bramble, honeysuckle, and strawberry leaves. The grubs of another kind may be found in Scotland inhabiting ants' nests, and even in a coal-mine, near Glasgow, *Tineæ* have been found in abundance.

The furrier has cause to dread the ravages of *Tinea pellionella*, which feeds on feathers and fur, and is no respecter of priceless sables and ermines. This insect makes its case of atoms of fur cut to the same length, and it works so insidiously that there is no outward sign of its evil doings until little tufts of fur begin to fall off, and then it is too late to save our valued garments. They are sure, sooner or later, to prove hopelessly destroyed.

Stuffed birds and animals can only be preserved from this annoying pest by being soaked in a strong solution of corrosive sublimate or some other poison. That this is effectual I have proved by the safe preservation of groups of stuffed birds, which have hung against a wall exposed to the air without protection of any kind for the last twenty-five years; these are as fresh and bright in plumage as when they were first obtained.

This fur moth is perhaps the best known species in our houses; it is a small, yellowish grey insect with pale brown spots on the wings. This is, I believe, the species of which I have secured the larvæ. Fur and feathers are alike its staple diet, and it is easily distinguished from other kinds by a dark brown mark on the second segment of the grub, which mark I could discern by a magnifying glass.

The linings of chairs and sofas, and the stuffing of carriage cushions, horsehair pillows, &c., are constantly attacked by *Tinea biselliella;* while cloth, flannel and any woollen material suits the taste of the almost universal *Tinea tapetzella*, against whose ravages every housekeeper has to devise a variety of protective plans. The moth is so small it can creep through minute crevices—a knot-hole at the back of the drawer, or a keyhole, will afford it access to the winter garments which have been put away in supposed security.*

Tapetzella differs in appearance from the fur moth, as its wings are half black and half grey, and it is also of larger size. In laying her eggs the moth has the foresight to place them rather widely apart, so that each grub may find space enough in which to feed; it is this habit which renders the creature specially destructive, as it attacks many parts of a garment and does not confine its ravages to one spot. The larva of this species forms covered galleries, in which it works, mining its way along the surface of the material, eating off the pile wherever it goes, and leaving threadbare tracts behind it.

Pellionella adopts a different method. The first work of the minute grub on issuing from the egg is to form a round case in which it may live, for it does not eat unless it has a house of its own. This curious habit may be seen in many other species amongst the *Tineæ*.

I have already mentioned one which forms its house of wheat-grains; another chooses particles of stone, of which it constructs its dwelling, and then it feeds on the lichens which grow upon old walls. Out of the fluffy seeds of the willow a *Tinea* forms a sort of muff in which it lives. Other species of the group form little tents upon the leaves of the elm, oak, and many kinds of fruit trees, these cases being so minute as to be unobserved unless the insect is moving within. One of the most remarkable of all the species is one which inhabits the leaves of the nettle. The tent looks like a tiny hedgehog, as it is formed of minute portions of the leaf glued together and studded all over with the stinging hairs of the nettle.

Mr. James Rennie in his *Insect Architecture* gives such an excellent description of the weaving operations of the *Pellionella* grub that I cannot do better than quote his observations upon it:—"It selected a single hair for the foundation of its intended structure; this it cut very near the skin, in order, we suppose, to have it as long as possible, and placed it in a line with its body. It then immediately cut another, and placing it parallel to the first, bound both together with a thread of its own silk. The same process was repeated with other hairs till the little

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* It would be a wise precaution to paste a piece of paper over the keyholes of drawers in which furs are kept during the summer; the moth could not find access to them if the drawers are close fitting.

creature had made a fabric of some thickness, and this it went on to extend till it was large enough to cover its body, which (as is usual with caterpillars) it employed as a model and measure for regulating its operations. The chamber was ultimately finished by a fine and closely woven tapestry of silk.

"When the caterpillar increases in length it takes care to add to the length of its house by working in fresh hairs at either end, and if it be shifted to furs or feathers of different colours it may be made to construct a parti-coloured tissue like a Scotch plaid. But the grub increases in thickness as well as in length, so that its first house becoming too narrow it must either enlarge it or build a new one. It prefers enlarging the premises, and sets to work precisely as we should do—slitting the case on the two opposite sides and then adroitly inserting between them two pieces of the requisite size. When the structure is finished, the insect deems itself secure to feed upon the fur within its reach provided it is dry and free from grease, which the grub will not touch."

This account shows that the moth grub can secrete a kind of silk with which it lines its cell, but it can use other materials out of which to weave a house for itself. When that house becomes too small it knows how to put in two side pieces to make it fit the size of its body. When full grown this same case forms its temporary coffin, for the little creature simply closes up the entrance and hangs itself up in some convenient place until in due time it comes out a perfect moth, ready to lay its eggs and pursue the instincts of its race. Surely we must admit that these lives which are carried on in our houses are very curious and worth investigation.

When we think of the minute size of these grubs (scarcely a quarter of an inch in length) and the vigour of the instinct they display, the secret mode in which they work in airless drawers and boxes, the perseverance with which the moth finds entrance into these hiding-places, we must credit this small insect with many remarkable qualities. Its lineage is extremely ancient, for it is twice mentioned in the oldest book in the Bible, and it is not a little remarkable that Job seems to have been accurately acquainted with the habits of the *Tinea* larvæ, since he says, in speaking of an ungodly man, "He buildeth his house as a moth and as a booth that the keeper maketh" (Job xxvii. 18). Both of these images point to the temporary nature of the dwelling. A booth consists of a few branches put together at the top of a pole where a man can sit and scare away wild animals from the Eastern fields of fruit and grain—an erection easily removed in a few moments; it is appropriately likened to the moth grub's tiny case, which is cast aside after a few weeks or months when the perfect insect has emerged. There are seven or eight allusions in the Scriptures to the ravages of the moth in destroying apparel, and remembering that Eastern people are in the habit of hoarding immense stores of richly embroidered clothing as an

evidence of great wealth, there can be no doubt but that the many species of *Tinea* which are found in Palestine were a very real danger, to be guarded against with the utmost solicitude.

ELIZA BRIGHTWEN.

THE HUNTING OF THE WREN.

AS is well known, the hunting of the wren belongs to Ireland, on St. Stephen's Day. It is said that a wren "betrayed," or, properly speaking, bewrayed, the Irish by tapping on a drum. To whom the Irish were "betrayed" is variously stated—some say to the Danes; some to the English in the Boyne and Derry days. At any rate there has been a custom which it is not too hard to call brutal, by which an unfortunate wren fell a victim to the "hunters," who used to carry it round in a barbarously maimed state, and expect a donation at each house they came to. I may say that the "hunters" have been boys, and no doubt "the fun of the thing," the excitement of the plunge "thorough brake, thorough briar," not merely the natural cruelty which is commonly attributed to boys, has had much to do with keeping up the custom.

I wish I could be sure the actual catching of the wren were a thing of the past, as a leading Irish newspaper has lately averred it to be; but it is only two or three years since a live wren, with its legs broken, was paraded about the neighbourhood where I was staying this last St. Stephen's day, tied to a pole; but of course the proceeding met with grave discouragement.

This time some boys came to the door of my father's rectory, in the county of Kilkenny, carrying an ash pole, about six feet four inches in height, at the top of which were tied boughs of holly, ivy, and laurel, and pieces of green paper, with a red paper "rose" surmounted by a few hen's feathers, which symbolised the wren.

This is the song the lads sang: I took it down amid much amusement from the trio. I give it precisely as they repeated it for me, with its confusion as to the sex of the wren, and its incorrect "Stephens's."

"The wran, the wran, the king of all birds,
St. Stephens's Day she was caught in the furze.
Although she was little, her honour was great!
Rise up, landlady, an' give us a thrate!

"I hunted this wran of a cold winter day,
Through muddy water an' yalla clay;
I broke her leg, an' smasht her pate,
An' buried her at Mr. ——'s gate.

"Little divel douse,
The biggest divel in the house,
Money I want, an' money I crave;
If ye don't give me money,
I'll bring ye to the grave."

The name after "Mr." is varied at each house. I have seen the lines given

"On St. Stephen's Day she was caught in the furze,"

and

"Although she was little, her family was great."

Observe that my boys had a better ear than the other people's!

EMILY H. HICKEY.

SUMMER STUDIES OF BIRDS AND BOOKS.*

THIS volume, by one of our vice-presidents, should be on the shelf of every Selbornian: it is one of those books which can be read again and again. Most of the chapters have appeared before, either as lectures or as papers in a magazine, and they all, with one exception, deal more or less with birds. The exception is the charmingly-written memoir of Billy, the author's wire-haired fox-terrier. But Billy is not in the least out of place in this book on birds, for no fox-terrier ever accompanied his master on so many ornithological rambles as he did; and no dog ever knew better than Billy when an interesting bird had been seen and it was his duty to become motionless. One chapter on the Engstlen Alp makes an excellent supplement to Mr. Fowler's chapters on the Alps in June and September in *A Year with the Birds*, and should be carefully read by all lovers of nature who intend paying a visit to Switzerland.

One of the best of the many good chapters is that on the Marsh Warbler; it furnishes an excellent illustration of the method of a thorough field naturalist, from the moment when he suspected the presence of the exquisite singer until he discovered the nest close to an Oxfordshire railway bank. "In telling the whole history of my acquaintance with the birds, I have been aiming at giving those who have not yet met with it a better chance of discovering it than they would gain from even the best handbooks. I have told them my own failures and difficulties, in order that they may avoid such experiences themselves, and may not waste time in looking for the bird in places where they are not likely to find him" (p. 95). This is the lesson which Mr. Fowler tries to teach us; may we profit by it!

In discoursing on wagtails Mr. Fowler expresses the view that the wagging of their tails is "no more than a nervous trick, which in their case, as in that of so many others, expresses happiness and satisfaction." but that "the nervous trick has a secondary use; it is not only a sign of satisfaction but also a signal, and the white is a *recognition mark*, as Mr. Wallace has called it."

The chapter on the "Songs of Birds" has a special value, from the writer being a musician as well as a naturalist; and his remarks on the comparative merits of our best singers will be read with interest by all naturalists. The appendix, too, contains a very useful account of the vocal organs of birds. It is a relief to find that Mr. Fowler does not attribute all singing to the desire of the cock bird to fascinate the hen. You cannot name a distinctive feature of an animal, whether in voice or appearance, to some persons, without their maintaining that it exists solely for the purpose of love-making. They seem to think birds spend their

* *Summer Studies of Birds and Books*, by W. Warde Fowler, M.A. Macmillan & Co., 1895. Price 6s.

whole time in courtship. If they did—well, "I would I were a bird"; but they do nothing of the kind, they have many serious duties to perform.

Some of those acquainted with Gilbert White's views on the hibernation of birds, will, we expect, be somewhat surprised to learn that he did little more than echo what Aristotle said about two thousand years before. The whole chapter entitled "Aristotle on Birds" is most fascinating, and makes one wonder, with Mr. Fowler, how the writer of the *Ethics* and *Politics* ever found time to pick up such an amount of information.

The other chapters are all well worth reading, and we can heartily recommend *Summer Studies of Birds and Books* as a most interesting and delightfully written volume

A. Holte Macpherson.

FARM VERMIN.*

What are "vermin"? Lord Palmerston defined dirt as "matter in the wrong place"; and in like manner we should have been inclined to say that vermin were creatures which intrude themselves where their presence is undesirable. In this little book, however, the term is apparently taken to designate any quadruped which makes its appearance without being reared by man, and hence we are introduced to helpful vermin, which will probably appear to some as anomalous a term as would be "honest thieves." This gives the book rather an unreal character, as if sundry rather slight sketches of wild life had been got together, and then the title devised to allow of the collection being described as a "handbook."

The list of animals thus brought into company is very miscellaneous, ranging from the red deer to the bat, while incidentally the owl and the kestrel are introduced, because they eat rats and mice. On the other hand, we are given nothing about the shrew, nor about the common brown mouse, both of which fully deserve a place in such a catalogue, however its heading is to be understood.

The papers being, as they are, by different authors naturally vary in merit. The two best are those on "The Weasel Kind," and on "The Mole and Hedgehog," which are by Mr. O. V. Aplin. In regard of the otter, however, —which is classed with the weasels—the editor, differing from his contributor, makes a statement which is rather startling—that this animal does not make fish the staple of his dietary, but cray-fish, and that if he does take to fish it is mostly to eels. This is certainly not our own experience, and it appears moreover to be at variance with the fact mentioned, also by the editor, on the very next page, that otters can be tamed and taught to fish for their master. Certainly it is not cray-fish or eels which they generally bring to him.

Among the other writers, Sir Herbert Maxwell, as was to be expected, writes pleasantly and instructively of voles. The paper on the fox and badger is discursive in a high degree, and amongst other topics treats of the Ground Game Act and its effects upon hares and rabbits respectively. These animals appear to receive a somewhat excessive share of attention. Besides the above mention of them, they have a chapter to themselves, and are again treated to special sections in one of those on "enemies to woodlands and nurseries." Then two chapters indeed appear to be somewhat superfluous: it is in them that the red deer is introduced—with a picture—on the ground that he nibbles the boughs and bark of trees.

The editor's own contribution on bats, with which the frog and toad are associated, somewhat reminds me of the famous chapter on the snakes of Ireland. Practically, all that there is to say amounts to this: "The influence they exert is altogether beneficial."

John Gerard.

* *Farm Vermin, Helpful and Hurtful.* by various writers, edited by John Watson, F.L.S. London: William Rider and Son, Ltd., pp. ii., 85. Price 2s. 6d.

SELBORNIANA.

"Sport" at Blackpool.—When some shocking story of gull-slaughter finds its way into the papers, says the *Globe*, the "cockney sportsman" is almost invariably held up to censure. No doubt he is sometimes guilty; but a revolting account which comes from Blackpool, on the Lancashire coast, shows that some provincials are every bit as bad. It is the narrative of an eye-witness, and describes how he lately saw "three men in a boat" put off from the shore. One managed the craft; two had guns, with which they blazed away at the half-tame birds. Nor were they unskilled gunners. The gentleman who watched their proceedings, estimates that nearly a hundred gulls were killed before darkness set in. As the shooting had begun between 9 and 10 a.m., and was vigorously pursued for about seven hours, his calculation does not look excessive. But the most cruel part of the hateful work came when the gulls, frightened by incessant firing, gave a wide berth to the boat. It is the custom of these birds, when one of them drops in the water, to fly to the spot, either in the belief that it has found food, or to render assistance. Knowing this, the "sportsmen" threw overboard a wounded gull, and when its comrades flew back, the slaughter went on as merrily as ever. To vary this amusement they sometimes aimed at the maimed bird, while later on they enjoyed a fine battue at the margin of the sea, where some fishermen were cleaning fish and throwing the refuse into the water. As this brutal business happened in winter, when Blackpool offers no attractions to visitors, the whole blame must be placed on its inhabitants for permitting such abominable inhumanity.

Starlings at Window (p. 56).—During the late severe weather I have had a great many starlings crowding to my bedroom window, where I am in the habit of putting food all the year round. The principal dainties I offer them are soaked sweet biscuits, oatmeal, and bread. I hope I have been the means of keeping several of these handsome birds alive during this winter, as also many others. They (the blackbirds, thrushes, chaffinches, greenfinches—of which quantities come—sparrows, robins, and last, but not least, the sweet little tits), knowing that they are always sure of finding food at my window, must have told others of their species this fact, for they all come in great numbers. I may here draw the attention of another of your correspondents, who asks the question, "Where are the tits gone?" Here, in the northern region in which I live (Westmoreland), they have certainly not departed to the south, but seem to flourish, and are now certainly, in spite of the still cold weather, thinking of "setting up house" (or nest). Can anyone tell me if there is such a thing as a cross between sparrows and chaffinches? A little bird comes to my window which seems to suggest it. It is an exceedingly pretty bird, with very defined well-marked sparrow's wings and chaffinch's head and shape. S. S.

I have frequently fed starlings on the sitting-room window sill, and a very noisy lot they are too. They were very numerous last year, and had scarcely standing room; but this year they are very scarce, as I suppose the intense cold has driven them further south.

Ferns, Ireland. G. E. J. Greene.

Woodpecker at Window.—Among the numerous accounts of feeding birds during the recent severe weather, I do not remember to have seen any mention of a woodpecker. It may interest your readers to hear that a great spotted woodpecker has come repeatedly to two windows in this house, apparently attracted by the nuts put out for the nuthatch. He was too shy to stay more than an instant, but there could be no mistake about him. Our other visitors include, besides the nuthatch, robins, chaffinches, tits innumerable, starlings, hedge sparrows, wagtails, common sparrows, and blackbirds, but no thrushes.

Fawsley, Daventry. S. W. Knightley.

An Appeal for Flowers.—Before the summer comes we are anxious to make an earnest appeal for more regular help in the work of obtaining flowers for distribution among the London poor. We feel sure that a far larger number of people would make an effort to supply flowers if they could in the least realize the

pleasure these flowers give to the recipients, the care with which they are preserved till every leaf is withered, and the disappointment felt when it becomes evident after a time that "the lady has forgotten to send again." We cannot but feel that comparatively little is done in this direction, only an infinitesimal proportion of flowers ever reaching those who cannot see them growing, while thousands of dwelling rooms are never brightened by those summer treasures which are blooming and dying in profusion in thousands of gardens within a night's post of London. The trouble involved in the little wearisome minutiæ of picking, packing, and sending seems the greatest hindrance to the wide development of the work, and we venture to suggest a way in which this difficulty may, to a large extent, be overcome, while at the same time a larger and more regular supply of flowers may be ensured. Our suggestion is, that any lady willing to help in this way should in her own neighbourhood enlist the aid of as many of her friends as possible, asking each to promise to send her on a certain day (weekly or fortnightly) whatever flowers they can spare. These could then be packed together in a box or hamper and dispatched to a given address, where they would be unpacked for distribution and the hamper returned. Many would, we believe, be glad to send a neighbour bunches of flowers for this purpose, though they might hesitate to take the trouble to pack in small boxes, procure an address, and post. The regularity with which it would be done would materially lessen the work, and a small contribution from each member would soon cover the cost of carriage. Small boxes of flowers are very welcome, and we are deeply grateful to those kind friends who so often send them; but where we have a tenement with over a hundred families, or a large Workhouse Infirmary to supply, nothing short of a hamper of flowers makes much impression. All further information will most gladly be given on application to the Hon. Secretary, Flower Distribution Branch, Kyrle Society, 49, Manchester Street, London, W.

Feeding the Birds.—I have a balcony over a portico, with a balustrade round it, and some wire arches. On the arches hang coco-nuts and pieces of fat, and crumbs and chopped fat, and a plate of sopped bread are thrown out every morning. The breakfast party is a most amusing sight! robins, chaffinches and sparrows, all set to work, to be chased off presently by a solitary wagtail who runs at and pecks all but the robins. The larger and smaller blue tits, with occasionally a cole tit, make short work of the fat, and the whole company are mournfully regarded by a party of four starlings, who sit on the wire arches and are generally the last to come down to tackle the larger pieces of bread, &c. I must not forget two missel thrushes, great enemies to each other, who fight over every morsel, and especially the bones, of which two or three are put out. The tits hang on the pieces of fat and coco-nuts in the prettiest manner possible, and it was a laughable sight to see a starling attempting to do the same thing with very poor success indeed. I have fed birds on this balcony for some years, and I am sure that watching them leads children to take an interest in natural history, and indeed grown persons too, and leads also to kindly thought and care for the dumb creatures around us. To children it may be interesting to know that two little blue tits built in a box on this same balcony, and had no objection to my taking the lid off and looking at the little mother on her nest until she had hatched out her family of eight. Their own entrance was through a small hole in the box.

West Sussex. F. C. C. KENNARD.

Run Mad!—We clip the following from the *British Weekly* of March 14: "Millinery seems to have run mad in London during the present month. I noticed the other day, in a West End window, a hat made to imitate a seagull's nest. All the details were perfect, and at the top sat the bird, looking as real as if it had just sought shelter after a fortnight on the frozen Thames. Another new hat was of burnt straw decked with a large poppy-seed, some green parrots' wings, some red roses, and some pale blue velvet rosettes.'

A Monster.—Canon Rawnsley publishes the following letter in the *Standard* of March 11:—"Lovers of bird-life will be beyond measure mortified to hear that one small landowner in North Oxfordshire has within the past ten months destroyed eighty kingfishers, 'in order,' as he alleges, 'to protect his trout

stream.' How one does wish that 'Naturalist,' who communicates the fact to *The Standard* to-day, would have gone a step further, and communicated the name of the monster. I call him monster, because he has taken the lives of these jewels of the brook under false pretences, and for selfish motives. Let him examine the stomach of the next kingfisher he cruelly destroys, and he will find as many crustacea, water beetles, and dragonfly remains as he will of trout spawn, and more minnows and stickleback fry than either. Why cannot the Oxfordshire County Council, through its General Purposes Committee, come to the aid of the kingfisher, as it has already come to the aid of the owl? 'The sea-blue bird of March" cries to them for succour."

Protection of Eggs of Wild Birds.—The Richmond (Surrey) Municipal Council have unanimously passed a resolution requesting the Surrey County Council to put in force the Act recently passed to protect the eggs of wild birds. Should this note meet the eyes of any member of the S.C.C. they are requested to support the action of Richmond.

"Sport" in Sussex.—"The Iping Harriers," writes a correspondent in a local paper, "were advertised to hunt a deer in the neighbourhood of Midhurst the other day, and the usual rabble turned up to see a miserable little fawn, which had been boxed in a shed the night before, uncarted on Stedham Common. The poor little beast, not knowing where to go, had to be thrashed with a whip to stir. Utterly bewildered, it made its way across the river to Woolbeding, about a mile distant, with the hounds at its heels, where it ran into the garden of Woolbeding Hall, and got entangled in some wire fencing. The gate having been taken off its hinges by the 'whip,' the hounds were admitted, and literally tore the animal to pieces."—*Westminster Gazette*, March 4.

NATURAL HISTORY NOTES AND QUERIES.

The Chaffinch's Song (p. 58).—I do not remember hearing it before February 25, just after the severe frost, and then it was not the full song, as almost invariably the last run or trill was wanting.

Keighley, Yorks. S. B.

I heard the "chaffinch" in full song on February 4, at about 9 a.m., in the sunshine at the margin of a grove; the thermometer standing at 33° F. at the time, same place and conditions; the air being calm. I did not hear them again till February 25, as a heavy fall of snow took place shortly after.

Ferns, Ireland. G. E. J. GREENE.

I first heard the chaffinches practising their songs on February 13 and 14, in the teeth of a piercing east wind.

Oundle, Northamptonshire. J. W.

I was away from home all January, but in February the chaffinch was still only calling out with his usual winter cry. On February 20 he commenced singing, and we have heard his song every day since. The day, as far as I remember, was very cold, with occasional snow showers, and a bitter wind, but there were bright sunny intervals when the sun seemed to have a little power.

Oakley, Brill, Bucks. A. M. GREENWOOD.

Chaffinches.—We have received many communications as to the presence or absence of chaffinches this year (see p. 56), which space compels us to omit. They have been plentiful at Oakley, Brill, Bucks (Mrs. Greenwood); "unusually abundant" at Oundle, Northamptonshire, and at Leeds (Miss Wickham); "many more than usual" at Bath (Mrs. Pedder); "more than ever" at Keighley, Yorkshire (S. B.); "an unusual number" at Weybridge (Miss Knyvett); "a good number" at Bungay (Mrs. Scudamore); "a great number" at Liss, Hants (Mrs. Watney); "no scarcity" at East Molesey (Lady Jenkyns); but very few at York (Mrs. Place).

Lemmings (p. 59).—R. W. will find a very interesting article by the Rev. W. H. Dallinger, D.Sc., F.R.S., &c., on the Lemmings, in the *Wesleyan Methodist Magazine* for March, under the heading "Popular Notes on Science." A. J. P.

Aviary.—I am anxious to know if greenfinch, goldfinch, redpole, siskin, and bullfinch need any very special feeding in captivity. I am sorry to have them at all, but they have been saved from far worse captivity; and they have plenty of room to fly and natural branches to perch on, and fresh green food and seeds, &c. I shall be glad of any hints to make them happier. With them are canaries, mannakins, and cape canaries. M. L. P.

Two Bird Queries.—I should be much gratified if you would let me know if birds choose fresh mates each year, or if they are true to their old loves; also the average number of years our wild birds live.

BLANCHE C. SANDERSON.

[(1) Some birds pair for life, some do not. But the question is a difficult one to answer with confidence in the case of some species. The questioner should notice which of our common birds are seen in the winter in pairs only (male and female), and which go in flocks all together. Most of the summer migrants pair after their arrival, the males coming a few days before the females: but this is not certain in all cases.

(2) This is a question much easier to ask than to answer. Where are we to find the evidence, for birds in a wild state? Doubtless the bigger birds, ravens, crows, gulls, hawks, &c., live a long time, but as regards the ordinary small birds I can only say that they *probably* do not live longer than eight or ten years.—W. W. F.]

A Cuckoo Note (p. 15).—I have had many opportunities of watching young cuckoos in various nests of robins, wagtails, hedge-sparrows, and greenfinches, and watch as carefully as I might I never saw the young birds pushed out by the little cuckoo. In one nest of greenfinches in particular that I watched very carefully, all seemed to go well with the nestlings for two days: then one young one was missing, and I found the little bloodless corpse a short distance from the tree. Each day another vanished till only the cuckoo was left. By searching about I found these other dead ones; none were where they would have fallen if they had been shoved over the edge of the nest, and though I still believe that the young cuckoo is the culprit and cause of his foster-brother's and sister's deaths, I do not think it is in the way usually attributed to the interloper. My long experience as a pigeon fancier has given me, I believe, a clue to the mystery, so I pass on my idea for what it may be worth. If a pair of young pigeons in the nestpan consists of a very strong first hatched one, and the second—probably a hen—much smaller and weaker, it frequently happens that the first hatched one pushes to the front, and makes the parents give it all the feeding; the little younger one, feeble, struggling, secures a little food, but not enough to do more than keep it alive two or three days, while the well-fed sturdy one grows to three times the size; then the weak one dies, and you find the anæmic little body on the floor of the pigeon house, where the old birds have thrown it. This is a common and disheartening occurrence, as all breeders of high-class pigeons know. Now, though the cuckoo's egg is so small, I have noticed that the very day after hatching, the young cuckoo is more than twice the size of the other nestlings; he is also strong and greedy, and his little gaping mouth seems quite to fill the nest, because he scrambles over the others in his hurry for food, and my idea is that he gets almost all the food the birds can bring, and sooner or later the weaker nestlings die and are removed from the nest by the parent birds. I never found a dead one with a full crop, but only these little pale dead bodies. If the young cuckoo pushed them out I should expect, though only a few days old, to find them fairly filled up with food. I should like much to know whether anyone ever found the young ejected nestlings in well-fed condition?

Alverstoke, Hants. GEORGINA S. PASLEY.

Gold Fish (p. 37).—Animals in confinement should receive every attention; suitable food being a chief necessity. The best food for fish is Gordian worms, found in mud in still water and sold in naturalists' shops. Keep the worms in a

pail of water with earth at the bottom. Vermicelli is appreciated by fish and may be given to them when other food cannot be provided, but ought not to be used exclusively. When keeping a *few* fish in a *large* quantity of water, with live pond-weeds, and water snails, it is not necessary to change the water except very rarely. A small globe, in which we kept newts, snails and weed, remained fresh for three years without being cleaned out, only being occasionally filled up with water. Soft water (rain water filtered through cotton wool) has been recommended for the aquarium.

When fish constantly rise to the surface of the water it means they are being suffocated for want of oxygen, and though the aquarium ought to be kept in a cool place, a little sunlight enables the water plants to give off the needed oxygen. No doubt fish are capable of feeling discomfort, as their nervous system is highly organised. The fact of being "cold blooded" does not really affect the question of pain.

Place over the aquarium a cover which will keep out the dust, but freely admit air; when dust does accumulate remove it with blotting paper. Some gravel should be placed at the bottom of the aquarium, on which the fish love to rub themselves.

Do not handle fish unless absolutely necessary, and always remove any which are diseased, from the others, and place them, when possible, in running water.

E. G. WOODD.

Gold Fish (p. 37).—It might not be quite correct to apply the word "cruelty" to the keeping of gold fish in a bowl of water, but it is an unsatisfactory method, for only a distorted image of the fish can be seen unless viewed from the top, and they thrive better if given some shade. With regard to food, if the water is changed frequently they may find enough sustenance from the animalcula therein, but a few specks of vermicelli given every other day, and removed if not immediately eaten, is advisable. The nervous system is probably less developed in fishes than in mammals, but that fish are capable of feeling is indisputable, and C. E. C. can prove this by simply touching one; it will give some sign of feeling, however slight the contact. F. W. ASHLEY.

Snowdrops—The winter aconite is the first flower to open in English gardens, but I think we give the first place in our hearts to the next comer, the snowdrop. Tennyson ignores the former: for him the "February fair maids" are "solitary firstlings," and so they are for most of us.

The snow has been slow and sullen in its going this year, and the snowdrops have been showing their narrow green leaves and white pointed buds above its last sullied remnants, having pierced their passage through the hard ground, still frozen at the surface and for many inches below. It is very beautiful to notice in what form and with what protection they have forced their way upwards. The leaf is sharply pointed, so is the bud which is held erect, that part which will fall lowest in the full-blown flower being now held highest. Two green ribs encircle the white bud on either side, and nearly touch above its head, forming a point which doubtless bears the brunt of the battle with the stiff, frozen ground. Between these green ribs extends on either side a white veil, so finely transparent that you scarcely might notice it. Within this green and white case the bud swells and grows, till at length it bursts one side of the veil near the top, and still growing and swelling it rips its casing to the bottom, the top part of the bud falls over, and it hangs, a perfect flower, leaving its green ribs and one untorn curtain still erect above it.

It is not easy to describe on paper even the simplest of Nature's changes, but five minutes' examination of snowdrops in their different stages will make fully clear all that I have tried to express. AGNES FRY.

A Word for the Cuckoo.—A young cuckoo was reared in a hedge sparrow's nest in one of three large cut yew trees on our terrace border last spring. My daughter and I had been told of the fact, but not in which of the three trees the bird was to be found. We were anxious to see it, so sat down at a little distance away, feeling sure we should see the old sparrows flying to and fro, and by this means find out the nest. We did not wait long before the parent cuckoo appeared on the scene and flew to the first yew tree, cut in level steps. She alighted on the second step and hopped leisurely all round the tree, evidently looking for the young bird, which she did not find there, so she flew to the next yew-tree, similarly

fashioned, and repeated the process, but was rewarded this time by finding her progeny. She sat and watched the young bird for some time, and then flew away; the sparrow foster-parents meanwhile flew wildly about, calling out loudly, evidently much disturbed by the event. These facts seem to prove that the parent cuckoo does take some interest in the egg after she has deposited it in the nest.

Canterbury. C. C.

Brimstone Butterfly (p. 58).—Mr. W. Warde Fowler will, I trust, excuse the suggestion, that the brimstone butterfly seen on January 20 was a hibernated individual, and not one newly emerged from the chrysalis. This species emerges in July and August, and often passes the winter in hibernation, appearing on the wing on the first sunny days of the new year.

RICHARD F. TOWNDROW.

[U. M. L. writes to the same effect.]

A Wasp Fight.—I witnessed a curious fight between two wasps when staying in North Wales last August. They fought furiously together, and finally both fell into the river Dee, on the bank of which I was sitting. They continued fighting in the river, but in a minute or two one got on the top of the other, sending him under the water. The conqueror, evidently leaving him for dead, flew away at once. I could not reach the other one to save him, and feared he would drown, but he floated down stream a little way, then rose from the water and flew straight to the bank. I suppose his wings were not soaked, otherwise he must surely have been drowned. KATHLEEN E. KNOCKER.

Rooks.—These birds are, as your correspondent Mr. Rooper says, very eccentric in their habits, and most interesting to watch. I have for some years been in the habit of feeding small birds in frosty weather. About three years ago I noticed that two or three rooks put in an appearance, and actually came quite close to the windows to feed. This year three rooks have again come to the front, and I yesterday noticed that one of them having carried away a large bone into the middle of the field, both his companions endeavoured to deprive him of it. One stationed himself on the right hand, the other on the left, and while the possessor of the coveted bone drove away his foe on the left, number three, on the right, would come and seize the attractive morsel; but at last number one succeeded in driving both away. He has not come to visit me to-day. Probably he may, on returning to the rookery, have had a thrashing for his selfishness from some members of the colony. I do not know of any rookery nearer Liss than Selborne. HELEN WATNEY.

Effects of the Frost.—In these parts the thrush tribe has suffered most from the frost. The thrushes themselves were silent till the thaw came, and even then sang but seldom, and with little life or interest in singing till March 10, when two of them in rivalry came near some of those nightingale notes always heard in March. The blackbirds have been still more reticent, though their numbers have not perceptibly diminished; they began on February 24. In other years they have started singing on February 15, and simply monopolized the end of that month and a good part of March. The rain on March 8 and 9 tempted the yellowhammer to begin his drawl, and the missel thrush to burst out in our garden after first trying his song over the day before in distant woods. The redwings were busy with our holly berries on January 30, but have not since reappeared. The fieldfares, after enduring the first week of frost, migrated somewhere, leaving only a few stragglers behind, which in their turn have left our country side. The larks and bramblings, who had also migrated to a warmer and more fruitful county, came back on the same day, March 1, and the larks immediately commenced singing. The tits seem to be the least affected in numbers or spirits by the long spell of cold weather. The great tit, it is true, was not to be heard during the frost proper, but he got to work directly it began to thaw, in the middle of the day, and on February 24 we heard the mellower notes with which he recommends his courtship. The blue tit was still better; scorning the bitter cold, he began singing on his usual day, February 12, and four days afterwards was seen pursuing his courtship in a cruel north-easter. The hedge sparrow waited for the thaw to set in, but sang so vigorously then that he made himself the most prominent bird of the month. The greenfinch began as usual on March 2; the chaffinch on February 13. A large flock of them of both

sexes were noticed day after day in January, exploring the ground under a line of beech trees in West Somerset, whither they had probably migrated from the Midlands. The cirl bunting began to whistle in the shelter of the gardens on February 16, and changed his quarters to the hillside on March 9. The next day the bass voice of the reed bunting came from the reed bed in the marsh, but that was the first visit paid to him, so he may have begun before. Lastly, the very first day of the struggling thaw, we heard the cheery laugh of the old green woodpecker, which meant that for him, at least, times were beginning to mend.

Malvern Wells. W. A. F.

Bird Notes from High Altitudes.—Refuse wheat, such as is sold for feeding fowls, has been soaked over night, and spread with bread and bits of fat for the birds' breakfast. The long note of a starling and the chittering of sparrows and chaffinches have showed how the birds were waiting. We have many chaffinches here, sometimes twenty feeding at once. They fight with each other—the cock birds—but not generally, so far as I have noticed, with sparrows. One chaffinch will quarrel with one sparrow, against whom it seems to have a special grudge. A whole flock of starlings settling on the feeding place does not disturb the small birds, while the descent of a jackdaw sends them off at once. But if a passer-by causes them to fly up into the tree, one or two brave birds (I wonder if always the same) remain till he is close upon them. Why do starlings wait on the tree when they are hungry, the food before them, and no one near? They eat with amazing rapidity, with quick looks, as if expecting danger. Both magpies and jackdaws snatch away the food as if they knew they were thieves. Do the small birds in severe weather leave their usual haunts for warmer places? In East Cumberland we have scarcely seen the earth or green grass for two months. This morning (March 5), in a ramble of four miles among fir groves, and in secluded glens, I have looked in vain for birds, the only sign of one being the "pink, pink" of a chaffinch among some trees. With another correspondent I ask, "Where are the tits?" also the robins, the blackbirds, thrushes and wrens.

Alston, Cumberland. I. E. PAGE.

TO CORRESPONDENTS.

B. P. and **R. C. C.**—Read Rule 4.

M. C. B.—See Rule 5.

A. M. G.—Please send the account of "Spink."

A. C. E.—Yes, it is the golden-crested wren.

R. C. C.—Will R. C. C. send his name and address to R. H. Gurney, Esq., 11, Egerton Gardens, S.W.

Erratum, p. 48.—The first word of the paragraph on Peafowls should be "The," not "All."

We have again to express regret that the limitations of our space compel us to hold over several communications and many notices of books.

We must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

SELBORNE SOCIETY NOTICES.

The Annual Meeting and Conversazione.—It has been decided to hold this on Wednesday, May 29, from 7.30 to 10 p.m. There will be vocal and instrumental music, microscopic and other exhibits, and refreshments. Tickets can be obtained shortly, of the Secretary or of the local Hon. Secretaries.

Donations to Leaflet Fund.—The Committee gratefully acknowledge the receipt of 2s. 6d. from Miss Gibson, and 1s. from Miss S. A. Street.

Field Club.—The following are the arrangements for April, but further information, together with the syllabus from April to June, may be obtained of the Hon. Secretary of the Central Field Club, Miss E. Temple, 50, Clovelly Mansions, W.C.

April 6.—Chingford to Woodford, returning to Hale End. Meet at Chingford Station, 3.10 p.m. (Liverpool Street, 2.33 p.m., Clapton 2.44 p.m.). Return day tickets 1s. After tea a paper will be read by Miss Temple.

April 20.—Waltham Cross to Old Manor House, Cheshunt (Wolsey's Forest Lodge). Meet at Waltham Cross Station, 2.40 p.m. (Liverpool Street, 2.15 p.m). Return ticket 1s. 6d. A paper on the house and neighbourhood will be given by Mr. W. B. Gerish.

April 27.—Croham Hurst and the Addington Hills. Meet at South Croydon Station, 2.42 p.m., London Bridge (L.B.S.C.), 2.11 p.m. Return from Woodside (S.E.R.), 6.30 p.m. Geological Gossip, by Mr. E. A. Martin.

Council and Committee Meetings.—The next meetings of the Council will be held on April 2 and May 7 at 5.30 p.m. The Magazine and Leaflet Committee meets on April 17 and May 15 at 5.30 p.m. The Field Club Committee meets at 6.30 p.m., after the Council meetings, and the Finance Committee at 6.30 p.m., after the Magazine and Leaflet Committee meetings.

New Leaflet.—The leaflet by the Rev. H. D. Rawnsley, on the New Wild Birds Protection Act, can now be obtained of the Secretary, at a cost of 6d. per 100, exclusive of postage. This low price has been fixed in order to secure its wide distribution.

NEWS FROM THE BRANCHES.

Clapton (Lower Lea Valley).—The last but one of the Social Evenings of this Branch was held on March 2, when a paper on the "Genealogy of Insects," illustrated with diagrams, was given by the Hon. Sec., Mr. R. Marshman Wattson. A very hearty vote of thanks was tendered to the lecturer, and the rest of the evening was devoted to vocal and instrumental music.

Halifax.—A highly satisfactory report of the work of this Branch has been received, which will be dealt with at greater length in the Annual Report of the Society. The local Committee is considering the advisability of applying to the County Council for protection for the birds as provided by the new Act.

Richmond.—The Annual Meeting was held on February 28, at the Talbot Hotel, Richmond, Sir Robert Hunter, M.A., in the chair, when the Annual Report was read, and election of officers took place. Messrs. Dimbleby, Wakefield, Maynard, Barnett, and others addressed the meeting. There was an exhibition of pictures and sketches contributed by members, and an instrumental and vocal concert followed.

The publishers of NATURE NOTES are willing to supply, gratis, back numbers of the magazine for distribution at local meetings. Carriage payable on delivery. Applications, with the quantity required, should be sent direct to John Bale & Sons, Oxford House, Great Titchfield Street, London, W.

Notices for this page must be received by the Secretary, Mr. Western, 20, Hanover Square, not later than April 15, to appear in May issue.

Nature Notes:

The Selborne Society's Magazine.

No. 65. MAY, 1895. Vol. VI.

THE SUMMER HOMES OF THE SEA-BIRDS.

AS we pass along the Western Coast of Norway, we find few spots more interesting than those cliffs that are emphatically called Bird-rocks. From Stavanger, right away northward, round the North Cape to the frontier of Russia, these cliffs rise up, gaunt, lofty, and mostly bare of grass or foliage; and as we usually see them, from early spring round to late autumn, they are tenanted by multitudes of sea-birds, which, at times, young and old, seem to surpass in number the very sands upon the sea-shore. As we pass in and out of the picturesque fjords that branch off, like the fingers from the palm of the hand, into smaller fjords and still smaller ones, and ramify far into the land, pouring down from many points throughout their course lovely fosses or waterfalls, we still meet with these Bird-rocks, here and there, in going through some narrow channel or winding round some projecting headland.

We steam in and out of the pleasant Hardanger Fjord, through the many ramifications of grander and gloomier Sogne, the Nords Fjord, and the Hjörund, past delightful Molde and the Lofoten Islands, round the North Cape to the Porsanger and the Varanger Fjords; and in all these fjords, or in the precipitous cliffs that frown above the fearfully narrow passages that lead to them, or from one to another, we are never without reminiscences of Bird-rocks that we have seen, or that we may look forward soon to see.

These are the summer houses of many of our migrant birds; here they have for ages bred without let or hindrance; and here-from they flock, as the long winter of Norway draws on, to pass the bleak season in regions that extend from our own shores far southward to the coasts of the Mediterranean Sea, or even beyond the Equator to the far distant realms of Africa.

Above the waterways there tower aloft miles of elevated snow-fields called Fonds, wherefrom, in the warmth of summer, there pour down the Fosses that form one of the glories of the land; and behind these Fonds lie the mountains or hills, termed Fjelds, on whose slopes or crests, or in the dales that lie between them, breed many such land birds as the woodcock, the fieldfare, and the redwing—called by Linnæus the nightingale of Scandinavia—which we welcome to our country before there sets in the long, long night of the north. Of the woodcocks we see nothing: in Norway, as in our own country, they are inland birds, fond of seclusion. The fieldfares build in colonies, like our rooks, mingled now and then with some of their other thrush kindred, the redwings; and these garrulous birds we may sometimes hear of near the people's houses. The Norwegians are a bird-living folk, and treat their birds very tenderly; thus it is pleasant to find that, in parks or public gardens, as for instance in Bergen or Throndhjem, you can get the sparrows to come to peck food out of your hand.

These Bird-rocks usually harbour at breeding-times several kinds of birds, but sometimes each is mainly tenanted, by a sort of prescriptive right, by one kind alone.

In the common breeding cliffs, the guillemot and the razorbill—which are the mers or divers (*mergus*) of the Devonian fishermen—lays each its large and single egg; and the mother-birds sit so close to each other that they often seem to touch as they crowd together along the narrow shelf, where the naked bird is hatched outside, to encounter, often, the bleak blasts of the north. Among these birds, or between them, the puffin digs a hole a yard deep, when the spot is soft enough; and there it hatches a single chick, clad in so loose a mass of down that it looks like a ball of fluff, wherefrom there projects merely the legs and the beak. The difference between the naked razorbill, exposed outside to the rains and snow-squalls, and the downy puffin in its maternal hole, is something to astonish us. Amid these birds, too, there breed shags, gulls, petrels, and cormorants.

The largest Bird-rock, Sværholtklubben, a thousand feet high, said to be the largest bird-cliff in the world, is almost entirely occupied by the well-known kittiwake (*Larus tridactylus*), which from its hind toe being a mere knob, is known as the three-toed gull. On this cliff the kittiwakes have built their nests for ages in prodigious multitudes beyond our power to number; here the nests, built of mingled bents and seaweed, remain from year to year on the narrow shelves, to be repaired, like rooks' nests, for each coming season, and added to, till they project, and hang on, or droop somewhat like the nests of the cliff-martin. When tourists arrive here, a gun is usually let off to arouse the birds, whereupon so enormous a cloud often arises that it darkens the whole sky. When King Oscar came here in his man-of-war, the birds had, in their customary style, like the birds on the "Devonian Headland," got so used to gun-firing as to be almost powder-

proof; and they could nowise be aroused for the King's gratification, till one of the corvette's cannon was loaded and let off, making with its peal so dire a thunder-clap against the huge cliff, that the birds, old and young alike, leapt out at last, alarmed, in greater numbers than ever.

Above these breeding colonies there often dwells, as a sort of *recognised* robber, a sea-eagle, which can, with one stroke of its wings, sweep off a young bird, and so it lives with the colony as a matter of course. But if there should appear any *unrecognised* pirate, such as a ger-falcon, it is vehemently and persistently assailed by the whole host of the bird-rock, till it is right glad to make off to some safer abode.

From these breeding places there pour southwards the innumerable flocks of birds that mainly swarm over far-distant shores, and inland waters, and other places, when the long night of the arctic circle compels them all to set forth to seek light, and food, and life, in far other regions. Some of them breed, partly, further south, along the coasts of the Hebrides, of Scotland, or of England; but it is in these far northern regions that their breeding-places are most largely to be met with; and it is only in these lands that some ever breed at all. Indeed, it is from districts farther north than these, from lands that no foot of man has ever yet trodden, that there flock in, year after year, multitudes of birds to swell the immense armies that, towards winter, pour southwards from the land of the long night. In what islands it is that some of the tringas or stints, the plovers, and the waders, actually breed, has only been dimly guessed at, but never yet actually determined or found. All that we know is that the breeding birds disappear northwards out of sight in spring, and that they return therefrom with their young, over the Arctic Ocean, as winter comes on, to join the mighty host that then pours south towards the lands of sunshine. Under the southernmost cape, Lindesnæs, the Brent geese pour in at the end of May regularly, in straight-lined rows; therefrom they sweep on, in the same fashion, over the sea, along the whole coast till they reach its most northern limit; and they still go northwards till they reach their breeding-places in Nova Zembla or Spitzbergen. Arctic travellers that have stood upon the northern heights of Spitzbergen have seen these rows of geese wandering over the icy sea in search of more farther islands, where no human foot has ever yet trodden. And the same thing happens with regard to many much smaller birds.

And it is utterly amazing to learn how far south these most northerly breeding birds have been found to go in migration. Some of them have been found in Damaraland, far south of the equator; some even so far as Cape Colony. Truly wonderful still is this yearly migration of the birds. We seem, even yet, to have got not much farther in our exact knowledge of these migrations than did the old poet when, with nothing but a poet's sympathy with this marvel, he asked:—

"Who bade the stork, Columbus-like, explore
Lands not his own, and worlds unknown before?
Who calls the Council, names the special day,
Who forms the phalanx, and who points the way?"

Sometimes we may even see parts of these enormous hosts of migratory birds. Once, when I was far north at a very late season, and when, on our way home, we were enjoying, as we came southwards, the wonderful beauty of the colours of the foliage of Norway, as the leaves were preparing to drop, I saw hosts upon hosts of birds migrating, in regular armies, moving in one plane, up and down in their onward flight, with regular leaders, and seemingly complex evolutions and changes. It was to me a magnificent spectacle. These were, I was told, the solan-geese on their yearly migration to the south. The solan-goose was, by gannet-rocks and gannet-coves, pretty familiar to me as the gannet, a bird that is not a bit of a goose at all. But these armies probably consisted of brent geese migrating to the south in other array than that wherein they move northwards in spring. And it was very delightful to watch the evolutions of these enormous hosts, and these I could trace along the coast for a long time, as our vessel steamed swiftly towards the south, on the same route as the bird-hosts themselves.

Among the birds that either breed in these far northern regions, or at least occasionally visit them, we meet with some that are strangely familiar to us. The wheatear and the redstart may be found on the fjelds near Hammerfest; the hedgewarbler, and the turtle-dove farther north still; and the very sparrow, both the common bird and its near relative the tree-sparrow, hardly distinguishable the one from the other, had, I heard, got up to Tromsö, the capital of Finmark, where, as with us, it makes itself quite at home. The magpie builds its big nest in the fagot piles near the North Cape; the cuckoo, on the heights around, entrusts her egg to the care of the rock-pipit or the wheatear; the sand-martins, where they cannot find other nesting places, dig their well-known holes in the turf-roofs of the houses; and the crows and the ravens make themselves nuisances by their readiness everywhere to peck at the fish that are hung up to dry. The willow-warbler sings his song here as blithely as he does in England; and in the most northerly willows that these birds can anywhere find, they build a nice round fluffy nest, lined with the white feathers of the willow-grouse.

Of the graceful little tits we find two or three species here, with the self-same ways as their interesting English kindred; and the fly-catchers, one or two wagtails, and the familiar walk of the starling, as distinguished from the hop of thrush or blackbird, delight the eye of an English bird-lover among many birds that are new to him, in these far northern regions.

To such a bird-lover, however, most of the birds that he

meets with are quite new. To him the eider-duck mainly calls up a light and truly delightful coverlet for his bed in very cold weather, but here his boat steams through flocks of these ducks, as he goes northwards; or in the Porsanger Fjord he is shown an island that belongs to the chief magistrate of Finmark, and is strictly preserved for the nesting places of these ducks, whose down forms the most valuable produce of the island.

The *Lusitania* steamed far north to the polar ice, along which the vessel edged for many miles, and the fortunate voyagers on board everywhere found birds of many kinds, with whales and shoals of porpoises, all around them.

An interesting question arises as to what, mainly, these enormous hosts of birds, old and young, feed upon. At stated times the parents leave the Bird-rocks, often in regular lines, and they return with crops full to repletion of succulent food. This they obtain in unstinted quantity partly from the ova of fish, but chiefly from enormous masses of crustaceans that drift to and fro all over the polar sea. The largest of all living creatures, the huge blue whale (*Balænoptera Sibbaldii*), finds ample nutriment in these prodigious swarms of crustaceans, of which the mighty giant's capacious stomach must, one would think, contain many boat-loads at a time. By and by the breeding birds and their young all leave the cliffs bare and take to the sea, and there they may be seen in entire clouds engaged in fishing. In winter the Bird-rocks are wholly deserted till March comes round, and then the preparation for breeding begins again, and the old haunts are once more seized upon.

On Sværholtklubben, as on other such cliffs, a very large number of eggs are taken for eating, but the Norwegians have not yet had recourse to ropes to secure these eggs, as is done in the Faroe Islands and in some parts of Scotland. They obtain as many as they want without having recourse to any such devices as this.

The more we get to know of these northern regions the more shall we have reason to be filled with wonder at the many and varied things that they disclose to us. The flora of the land is well worthy of study. Sometimes we may see a whole island covered, in June, with the white flowers of the cloudberry, and these produce in autumn luxuriant branches of red berries that are much sought after. And at another time we hear of shores and islands lying farther north than Scandinavia where prodigious masses have been discovered of bones and tusks of the mammoth and the woolly rhinoceros, thus forming, in the *Arctic* Ocean, Treasure-islands richer than any that poets have feigned amid the waters of the *Pacific*. An enormous tusk therefrom, which, though incomplete, is some eight feet long, is exhibited, under a table, in the *Geological Museum*. These are the remains of hosts of huge animals that seem to have been overwhelmed or destroyed in some one of those ice-ages, of

which Sir Robert Ball discourses to us so freely and so delightfully. We follow him with much interest when he shows us, by exact mathematical demonstration, that the ice-cap shifts periodically from the one pole to the other, the astronomer's pendulum beating *ages* as the clock's pendulum beats *seconds*. And imagination tries to picture the state of the North Pole when the last glacial age had shifted to the south; or what might have happened when the pendulum swung back again, and the increasing ice and advancing waters entombed, perhaps, all these mammoths and woolly rhinoceroses in the Treasure-islands where we now find their remains.

Richmond-on-Thames. W. J. C. Miller.

VITA NUOVA.

(The First Buttercup.)*

This is Earth's token of a life renewed—
While yet the grim frost binds her, and the snow
Lingers within her shadow, she would show
Her stillness was but Death's similitude.

Swiftly her fairy-prince drew nigh and wooed
With sunny kisses, waking her, and lo
Here, on her breast, she placed his colour, so
To gladden him, whose love her love pursued.

O little flower, apparelled like the day,
Thou bringest visions of the golden fields
Of summer, breathing perfume; song and mirth
Of children tumbled in the flying hay;
All flowers; all fruits; all gladness Nature yields,
And sends us by the love-awakened Earth!

Richard F. Towndrow.

Rooks and Crows (p. 50).—I wonder whether those interested in the building of rooks in Kensington Gardens noticed if they were interfered with by crows in 1894? They built successfully in 1893, and the birds were seen about the nests in 1894. Now, in a group of elm trees which I can watch from my windows, some rooks built and laid eggs, and were then attacked by other birds, which I thought at the time to be other rooks, but now believe to be crows. They fought on the nests, and the parent rooks were driven off and eventually forsook them. I mentioned this to some friends living in Essex, and they said that the rooks in two rookeries near to them were driven away by crows about three years ago. Some carrion was put out to tempt the crows, and by this means five or six pairs were shot. The rooks returned to one of the rookeries the following year, but the other is, I think, still deserted.

Chichester. Frances C. C. Kennard.

* I was surprised to see a plant of the creeping crowfoot (*Ranunculus repens*) in flower on February 26, before the frost was out of the soil, and while patches of snow were still unmelted.

HAM COMMON: A STRUGGLE FOR PUBLIC RIGHTS.*

NOT a few of those who read these pages have wandered among the beautiful glades of Richmond Park, and some of them live in its vicinity, yet among that number how many have any idea of its origin, or why its lawns and noble groves of oak were not effaced long ago to make room for terraces and villas? Some, too, are perhaps unaware of the reason for the fierce contest between the villagers of Ham and the trustees of the lords of the manor, over the public rights of the former on Ham Common and the Common Fields that lie between Richmond Park and the Thames.

All this has been explained and clearly laid before us by Mr. W. H. Harland, of Kingston-on-Thames. It is hard enough to witness encroachments of the lords of the manors in country districts, but the gravity of the case is doubled when these acts of repression take place in the neighbourhood of a large town, where, if the lord of the manor claims the right to enclose, he will probably deal with the enclosure in the way most profitable to himself, not by laying it out in cultivation, but by disposing of it to the highest bidder for building purposes. We have had, however, occasion to drive this lesson home so often to our readers that practical application to the case in point constitutes the only excuse for bringing it forward.

If the origin of the New Forest is now shrouded in the mist of antiquity, that of Richmond Park (which is a New Forest in miniature) stands out clear and sharp. In the year 1635 a deed was drawn up between Charles I. and certain of his subjects, freeholders and copyholders of the parishes of Ham and Petersham. Shortly stated, the deed (of which a reprint in full is given at the end of Mr. Harland's pamphlet) provides that in return for the freeholders and copyholders giving up to the King 483 acres in the parish of Ham, and 265 acres in the parish of Petersham, they should have reserved to them all their right and interest of common in all waste grounds belonging to the several manors of Ham and Petersham that were not to be enclosed in His Majesty's new park. Thus Richmond Park is exactly two hundred and sixty years old, and for the same period the villagers of Ham and Petersham have enjoyed the rights of pasturage on Ham Common throughout each year and on the Common Fields bordering the banks of the Thames for six months of the year. These rights have been doubly fortified, first by the deed, and secondly by the time they have existed.

Down to comparatively recent years these rights were fully

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* *Ham Common and the Dysarts: a Brief and an Indictment*, by William H. Harland, Secretary of the Ham Common Defence Committee, Kingston-on-Thames. Eaton Hart Bros., Printers, 8vo, 1894. Price 6d.

exercised, and to within the present decade they were practically unquestioned. As it has a considerable bearing on the dispute, it must be mentioned that the Common and the Common Fields were for generations controlled by the village vestry of Ham. Mr. Harland devotes a whole chapter to quotations from the minutes of the vestry books to prove this. These village archives are contained in seven volumes, and with but a couple of breaks extend from the year 1721 to the present date. The general tenor of these extracts goes to prove that the vestry had complete authority over the Common and the fields at any rate down to the year 1862, when the Local Board was established. The vestry, which had hitherto maintained the Common by funds from the Poor Rate, was now relieved of this duty. The Local Board never assumed proper authority over the Common, and thus responsibility for its proper maintenance was allowed, in common parlance, "to slip between two stools."

The loosened hold of the vestry over the Common and the Common Fields paved the way for the acts of repression by the trustees of the Dysart estate, which led up to what the author of this pamphlet styles "the great battle of 1891." The trustees, who for the past eighteen months had been helping themselves to eighteen or twenty cartloads of gravel on an average each week from the Common, put up notice-boards forbidding anyone else to do the same save with their leave, under penalty of prosecution. They also erected notice-boards on the Common Fields, threatening to prosecute for trespass.

The servants of wealthy people are generally prone to forget their humble rank and to copy all the vices, and none of the virtues, of their employers. A butler, however, named Radford, proved a worthy exception to this rule, for to him belonged the honour of starting a successful agitation against these determined infringements of public rights. After more than one public meeting (the first of which he convened), unanimous in opposition to the high-handed action of the Dysart trustees, Radford, in company with several others, including the author of this narrative, proceeded to cut down the obnoxious notice-boards. A criminal prosecution at the Quarter Sessions was the result, but the jury returned a verdict of "not guilty," and the courageous aggressors were welcomed home in triumph. Only last summer the trustees were again foiled in their attempt to prosecute a labouring man for removing gravel from the Common. A permanent Committee has been formed to uphold the rights of the villagers, and it is to be hoped that its members will be spared a protracted struggle if only Ham Common can be brought under the operation of the Metropolitan Commons Act.

ARCHIBALD CLARKE.

A STRANGE PET.

ALTHOUGH it is possible to keep as pets in England a certain number of tropical animals, yet from the coldness and dulness of our climate they usually seem unhappy and do not as a rule live very long, nor are they nearly as lively and amusing as they are when kept in their own country. While residing in Singapore I have kept a considerable number of Malayan animals, birds and reptiles. Most have thriven well and been a source of great amusement to those who have seen them, but few have been more interesting and diverting than a tapir which I possessed for some time. The tapir of itself is an animal of great interest, not only on account of its curious form, but because it belongs to a class of animals formerly distributed over the whole world, but now, alas, dying out even in the distant corners of the globe where it has persisted since the Eocene period.

The little animal, which I bought from a native, was a female, and was so young that it had still the colouring of youth, that is to say, it was dark brown ornamented with creamy yellow spots and stripes, and its eyes were of a greyish blue. It was about as big as a large Skye terrier dog. "Eva," as she was called, was exceedingly tame, and was afraid of nothing. She was very good-tempered and full of play, being very fond of the terriers, with whom she would sport till the sun became hot, when she would go into the shade to sleep. She would pursue the dogs as quickly as she could, and try to nip their tails, till they in turn pursued her, pretending to bite her on the nose. She would often come slyly up to any person she saw and nip hold of their clothes with her teeth and shake them, sometimes inclosing a bit of skin accidentally as well, which was decidedly startling to strangers. Her food consisted of boiled rice with plenty of salt and grass, and bushes, chiefly those of a very common and pretty shrub, the Melastoma; of this she would eat great armfuls, and she would often seek for the bones discarded by the dogs, which she nibbled with much pleasure. She always required great quantities of water, both to drink, and also for bathing, and much delighted in a swim in the lake, diving to the bottom, where she amused herself by digging in the mud, remaining a long time submerged.

When she was vexed, or wished to remonstrate against anything, she used to utter a piercing whistle through her trunk, which was like that of an elephant, but very much smaller. She used it to push food into her mouth, but never attempted to pick anything up with it.

As she got bigger she became more active, galloping about the grass and tossing up her head like a pony, and, with a good start, was not easy to catch. Clumsy as she looked, if she got an opportunity she would climb upon a chair and thence upon the table, and on one occasion, in so doing overset the table, covering herself with ink and white paint which happened to be there, and making a horrible mess.

After I had had her about a year, she rather suddenly took on the colouring of the adult tapir. The soft brown fur which she was covered with became darker and more scanty, and the yellow spots disappeared, the tips of her ears became white, and from the centre of her back to her tail she was of a greyish white. Eventually she was entirely black except the tips of her ears, and the greyish white saddle. Her eyes became darker in colour and her trunk longer. She was now as big as a good-sized pig, and much too heavy to lift; still as good-tempered as ever, she became more sluggish in the day-time. In the early morning she went out to feed on the grass and bushes, but at nine o'clock usually returned and slept under a tree till the evening, when she became lively again; and so she lived happily till one day it was noticed that she was rather thin and disinclined to move, and a few days after, on returning from her swim in the lake, she lay down beneath a tree to sleep, and was found dead half-an-hour afterwards, to my great sorrow. A *post-mortem* disclosed that she had died of a rapid consumption, a disease peculiarly fatal to tapirs.

In a wild state the Malay tapir haunts the thickest jungles, and as these are gradually cleared it will, sooner or later, become extinct, indeed, it is wonderful how so defenceless an animal has existed so long in a country abounding in such ferocious beasts as the tiger and black panther. The tiger, however, is comparatively rare in the forests of the mountain slopes where the tapir delights to live. The colouring of the animal, and the speed with which it dashes off when disturbed are its only means of protection. The little one with its brown coat spotted with yellow so much resembles the ground flecked with sunlight falling through the foliage, that it is quite inconspicuous when sleeping in the jungle, and might easily be overlooked by a prowling beast of prey; while the adult, while at rest, with its greyish white back, looks, at a little distance, like one of the grey granite boulders by the rocky streams where it loves to lie.

HENRY N. RIDLEY.

SPRING.

THE throstle calls from yonder wood,
The earth is sweet, and fair, and good:
The throstle calls from yonder wood!

Wee lambkins lie in meadows green,
And Spring to them is life, I ween:
Wee lambkins lie in meadows green!

The sorrel lifts her dainty head;
With tender green the earth is spread,
Where sorrel lifts her dainty head!

The winter's past, young Spring is here;
Farewell to all that's old and sear:
The winter's past, young Spring is here!

S. S.

BIRD NOTES.*

THIS little book has given me very real pleasure, and I commend it without hesitation to the attention of all who care for birds, or feed them at the window. I do not think my judgment is biassed by the fact that these notes were made at Sidmouth, a place endeared to me by many tender associations, as well as by its own rich and varied beauty. Miss Hayward had the true gift of observation, and as she was a woman of cultivation and an artist, she was able to record her observations simply and truthfully, and here and there to make a not unsuccessful attempt to interpret them. She had little or no scientific knowledge of birds, no pre-conceived ideas as to the "philosophy" of their life, or the moral perfection of their nature: she simply noted what she saw at her window, whether it pleased her or displeased her. At intervals during many years she made these notes, never thinking of publication, and never saw them in print: but the friend who has edited them has indeed done wisely, for they will be not only delightful reading for everyone, but of some real value to the ornithologist.

Few of us have the leisure or patience to sit at a window and watch for a whole morning, and still fewer would remember to write down *at once* what they see. Turn to p. 92 of this book, and you will find an instance of the way in which even the quiet tenant of a drawing-room may see and record something new and strange. Two robins were standing face to face, and going through a performance that reminds me of Mr. Hudson's chapter on "Music and Dancing in Nature." The date was January 25th (it is here recorded, though in other cases often unluckily omitted), and the pair were evidently courting. "First one and then the other kept up a kind of dance and song, attitudinising like ballet dancers or nautch girls." I will not anticipate the reader's pleasure by quoting further.

Miss Hayward was wonderfully happy in discerning and drawing the characters of her birds. Her blue tits were, as a rule, forward and quarrelsome: of one of them she says, "The bird must be possessed by a devil of some kind: the very expression of its face is savage, and its attitudes still more so." Her coal tits, on the other hand, were always quiet and modest. She had, among some more amiable birds, an overbearing robin and an ill-conditioned old chaffinch. She saw one blackbird pecking out another's eyes; and she had strong evidence that a nuthatch had bored a hole through the skull of one of her chaffinches. She has, indeed, much to tell us of more pleasing traits: but she was too honest to allow herself to believe, with the sentimentalists, that birds are angelic in their nature, and that man alone is vile.

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* *Bird Notes*: by J. M. Hayward. (Longmans & Co. 6s.)

Sometimes she made a mistake, but in most cases she was able to correct it herself. At one time she thought the martins did not feed their young impartially and in due order: but she was able later on to correct and explain this impression. There is one observation which must, I think, be a mistake (p. 136), and is uncorrected. She was watching a yellow wagtail wagging away in the brook and, raising her eyes, saw a *flycatcher* wagging its tail in a tree overhead—imitating the wagtail, as she thought. It was May 5th, early, I think, for a spotted flycatcher in Devon; was it not the female yellow wagtail that she saw, and mistook for the other bird? A male wagtail looked down upon, and a female looked up to, may appear very different.

ROBIN WATCHING HERON.

Miss Hayward made many interesting notes on the behaviour of birds in courting, nest building, instructing their young, and preparing to migrate. A passage on p. 50 should be of special interest to Mr. A. R. Wallace: and the last sentence on that page is worth quoting as an example of this simple lady's common sense. "Birds inherit a great deal, but not everything: and, perhaps, as with ourselves, what they inherit has to be cultivated."

I warmly commend the book to readers of NATURE NOTES. The illustrations by Mr. G. E. Lodge, of which, by the courtesy of the publishers, we are enabled to give an example, are charming: the price of the volume is somewhat high, but we may hope for a cheaper edition.

W. WARDE FOWLER.

RICHMOND SCENERY AGAIN IN PERIL.

IT seems only a month or two ago that readers of NATURE NOTES had their attention directed to a scheme formulated by the Dysart Trustees by which, under the specious plea of "developing" their estate, Richmond and its neighbourhood was to be deprived of the larger portion of Petersham Wood, and approximately three miles of the new embankment won from the bed of the river Thames by public money—a most invaluable endowment to river lovers. In place of the hawthorn glades, oak woods, and breezy river side, they were willing to bestow upon us square miles of jerry-built streets, and a macadamised river road. By good fortune the deed of Charles I., which made the Dysarts lords of the manor, also gave rights to the inhabitants of Petersham, and brought into play the powers of the Richmond Corporation, whose consent being withheld, the scheme fell through. Any renewal of these attempts upon public right will unquestionably be watched with the most jealous eyes by the local Selbornians and others interested in the preservation of the scenery of this admired district. What cannot be done by hook, may sometimes be done by crook, and a flank movement may turn the enemy's position when a direct attack would fail. There has been an increment in the value of land from the builder's and landlord's points of view, which must not go unappropriated, though the whole charm of the district go with the operation! So the landholders are eager to turn this value to account, and now once again the much vaunted scenery from the Terrace, and Thomson's Walk in Richmond Park, are in peril, and this time by a much more insidious and powerful attack—by the exercise of private rights of building. Between Sudbrook Park, wrested from the builders in 1888 by the efforts of the Selborne Society, and Petersham Park, the happy playground of London children when they make holiday, are the grounds of Bute House, a domain of grassy tree-shaded vistas, a most important element in the view from Thomson's Walk, marching as it does with the walls of the Park for a considerable distance.

Only a few years ago this land and house came into the market and was acquired by a local resident of considerable social and public position, who was—notwithstanding his position as adviser to the Dysart Trustees—by his generous gifts to the town of Richmond, and assistance rendered in the acquisition of the lovely Terrace Gardens, credited with having the peculiar scenic possessions of Richmond in as high regard as any other resident. It is therefore with a shock of surprise that one learns from undeniable sources that the Bute estate is already marked out with lines of pegs for streets of brand-new villas, that the old house is to be taken down, the lawns destroyed and stately trees rooted up, and another wilderness of houses added to

London's accumulations, an old-world village modernized, and, most cruel blow of all, a spot of world-famous scenery irretrievably ruined.

Unhappily, one can only see the crudest commercialism in this transaction, though locally the usual selfish appeals have been made to the trading and working class interests. More work, better trade, and as a sop to parochial minds, increased rating value. If the public interests were the predominant feature in the change one would accept the inevitable with a sigh, and leave the future to work out new features of beauty in place of the wooded charms sacrificed to present-day utility. But the history of Petersham forbids such a view. The present owner of Bute House has achieved the hitherto impossible task of getting the Dysart Trustees to dispose of land and houses for the purpose of rounding up the new estate to better develop the newly acquired property. When the local authorities, a few years since, wished to acquire a strip of land from the same estate for the purpose of putting some small property into good sanitary condition, they were met with a point-blank refusal: the poor people must face disease or go. But when the same adviser wishes to "develop" the estate, the embargo is taken off. No comment is necessary. It is gravely to be regretted that the conditions of civil life put it in the power of wealthy landholders to sacrifice to the narrowest self-interest those features of natural beauty which, as in this instance, afford delight to a yearly procession of thousands of sightseers—delight of the purest and most satisfactory character, in days when doubtful spectacles are only too often put forward.

So much importance is given to this "development," because it is feared that it is only the precursor of an avalanche of brick and mortar, which will shortly engulf the rolling woodland visible from the Richmond heights, and fatally change its entire character. The protest of two years ago saved Petersham Common and Wood, and the noble esplanade on the river side by Ham, because there was an invasion of public rights. Can the spoiler's hand be stayed when he carries in it the formidable words "private rights"?

JOHN ALLEN.

Swallows at the Cape.—The following is an extract from a letter from the Komgha District, South Africa. "Some swallows used to build over a door of one of the farm buildings, roofed with corrugated iron, but they never reared a brood because a strong wind shakes the iron, so that the nest came down. They used to build five or six times, and sometimes got as far as young birds. We tried many things and have at last succeeded by putting a handkerchief round the nest, and fastening it with wire. One strong wind loosened the nest, so it simply lay in the handkerchief with an inch between it and the roof, but the birds soon built it up again, and there are young birds now."

B. P.

IN THE GUIANA FOREST.*

MR. RODWAY is a keen observer and a picturesque writer. His book is consequently both realistic and readable, which cannot always be said of scientific works. Even the unscientific will find it fascinating, and abounding in information lucidly and attractively conveyed. The luxuriant tropical world Mr. Rodway has taken upon himself to describe is magically brought before the eye of the reader, who feels himself translated to its midst and conducted by a very well-informed and intelligent guide through its tangled brakes and vast savannas. The volume, moreover, is splendidly turned out, and contains some fine illustrations. The book requires only to be read to be admired; even without Mr. Grant Allen's preface it was sure, on its own merits, to be recognised as an important contribution to the natural history of the tropics. Mr. Rodway is never obscure. His language is always so simple and forcible, that his opinions and descriptions can be at once comprehended. He is also systematic. His scientifically-trained mind invariably presents its ideas and impressions in their proper sequence, so that the reader's memory is aided and the drift of all arguments understood.

The forest is the first subject treated. We are transported immediately into the sombre gloom of the great Guiana forest. We feel the impressiveness of the almost unbroken silence; notice the harmony of colour that exists between the foliage and the insects, birds, and animals, that have their haunts therein; and see before our eyes the eternal life-struggle of plant and animal life. Our ordered gardens at home can give us no idea of the fierceness of the battle ever raging in nature. It is only where the hand of man has not curbed her that she can be observed in all her wildness and reality. Mr. Rodway, as has been said, makes us see and feel all this. His pages disclose to us as much as we can possibly know about a Guiana Forest without a visit to that country.

The chapter on the man of the forest gives us a great deal of information about the South American savage. He has accommodated himself admirably to his surroundings, and is as much a part of the whole as the jaguar. For food he fishes or hunts. Like the wild animals he retires before the white man. He cannot adapt himself to a new environment, and, where he is prevented from migrating, becomes extinct.

The Indian baby early begins to crawl. He is taken down to the creek and encouraged to move his limbs about until able to swim, which he frequently begins to do before he can walk. He is stimulated to use his feet by the application of virulent *hucu* ants, which his father "lets bite the little crawler until he strives with might and main to get away." He is from his youngest days trained up to be a huntsman. He gets no education, and plays hardly any children's games. There is little gossip in the Indians' settlements, especially among the women, but, as Mr. Rodway remarks, "The Indian female differs in many other respects from her civilised sister than in holding her tongue." It is her husband who wears ornaments, and paints and decorates himself; it is she who carries the goods and chattels of the household when a journey is made. It would be an indignity for the husband to carry anything but weapons.

The Guiana savage has little mental development; but he is simple and gentle, and, unlike the North American Indian, "unspoilt as yet by alcoholic civilisation," as Mr. Grant Allen puts it. But he is bound to become extinct. In recent years he has steadily declined. Many settlements where once the traveller found a hearty welcome are now deserted and blotted out, "not even," to use the picturesque description of Mr. Rodway, "not even a parrot remaining to speak the language of the lost tribe."

The other chapters are equally entertaining. We learn all about the habits of the cavies, the tapirs, the hogs, the ant bears, the labbas, and the countless others. No country in the whole world exhibits so many different forms of animal life as South America. It is at night that the silence of the forest is most broken. A

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* *In the Guiana Forest: Studies of Nature in relation to the Struggle for Life*, by James Rodway, F.L.S., with Introduction by Grant Allen. (London: Fisher Unwin, 1894. 7s. 6d.)

continual hum is heard ; owls utter their weird cries, shrill wails and the buzzing of clouds of insects meet the ear everywhere.

To detail the information contained in the other picturesque and instructive passages of Mr. Rodway's book would be unfair to him. He is best able to tell his own story. To his book itself all who are interested in natural history, or who wish to spend many pleasant and instructive moments are referred. It only remains to passingly allude to the chapters on the "Struggle for Life," on the "Interdependence of Plants and Animals;" on "Up the Trees," and "On the Tropical Garden." Many excellent things will be found in them, notably some remarks on the fertilisation of orchids ; on the peculiar uses of the shapes, colours and perfumes of flowers ; on the destruction, by hoards of insects, of forest giants ; and on a host of other topics.

RICHARD KEEGAN.

IN THE NORTH COUNTREE.*

Two books have remained over long upon our shelf, and now comes a third to bear them company, or rather, to join them in this notice.

The Rev. M. C. F. Morris, who succeeded his father at Nunburnholme Rectory, published not long before he went there a volume on *Yorkshire Folk-Talk*, and Canon Atkinson, the historian of the "moorland parish" which formed the subject of a notice in NATURE NOTES for January, 1892, has published *Memorials of Whitby*. Each of these books affords material for a long review, but the exigencies of space demand a short one, and as that is better than entire neglect, we proceed to give it.

Mr. Morris writes as an enthusiast for his local dialect. His book begins with a sentence "He gav oot sikan a stevn," uttered by "a Yorkshireman of the old school," who "spoke the dialect in all its richness, raciness, and purity," and the puzzled southron takes comfort when Mr. Morris says, "Yorkshireman though I was, I did not remember to have heard [stevn] spoken before." For the benefit of the ignorant (among whom we number ourselves), we may note that the word "means a loud shout, and may be connected with the modern Danish word, *stævne*, to summon or cite."

But Mr. Morris does not confine himself to folk-speech, although his account of this, interspersed as it is with amusing examples and excellent stories, is interesting reading. He tells us about field-names (of which he gives a list), gives graphic pictures of Yorkshire life and character, treats at length of customs and superstitions in a way which would delight the Folk-lore Society, and ends with an excellent glossary of nearly 150 pages, which adds something to our previous knowledge of a district by no means unworked from the English Dialect Society standpoint. The interest of the book, therefore, although strongest for Yorkshire men, is by no means restricted to them.

Whitby is so favourite a subject of the painter that even those who have never been there are in some measure familiar with it. But no superficial familiarity is that displayed by Canon Atkinson. He begins with a delightful chapter on the story of Cædmon, passes on to the history of the place, of its name, its site, topography, abbey, market place—all of which he treats with the thoroughness that might be expected of him. Certain local historians are set right, and any amount of varied information is brought to bear on points connected with the history of the place. It must, however, be admitted that a great deal of the book is mainly of local interest, and those who take it as a guide to a summer holiday at Whitby will be the most likely to appreciate its contents. By the way, we note that Canon Atkinson usually has "Caedmon," whereas Dr. Murray,

* *Yorkshire Folk-Talk*, by the Rev. M. C. F. Morris (Frowde, 7s. 6d. net). *Memorials of Old Whitby*, by the Rev. Canon Atkinson (Macmillan, 6s. net). *Annals of a Quiet Valley in the Wordsworth Country*, edited by John Watson (J. M. Dent & Co., 3s. 6d. net).

in the rules for compositors printed for the Clarendon Press, and generously supplied by them to all who care to write for a copy, tells us to write Cædmon, and says it is incorrect to separate the letters. This disagreement of doctors is puzzling to the lay mind.

The most popular of the three volumes under notice is undoubtedly the *Annals of a Quiet Valley*, in which binder, printer and illustrator have combined to produce a pretty and dainty book. It is eminently readable, moreover, and gives a vivid picture of life early in the century in the out-of-the-way valley in the Lake District, the name of which is not given. Mr. John Watson, whose name appears, we believe correctly, as author on the cover, stands on the title-page as editor of the volume, where the author is said to be "A Country Parson." We do not see what is to be gained from this attempt at mystery. It is full of good stories, some of which have also been localized elsewhere, of records of old customs, portraits of quaint characters, evidences of days when the schoolmaster, if abroad, exercised a strange and well nigh incredible number of occupations in addition to those more especially connected with his office. We say this in the supposition that the extraordinary document on p. 36, which space will not allow us to reproduce, is genuine; but we confess to some doubt on the subject. The wills and other documents from the church chest afford interesting reading.

Selbornians will peruse with especial interest the accounts of the two naturalists, John Gough and John Dalton, who, though not actually natives of the dale, were closely associated with its history. Gough, the "blind philosopher," as he was called, was a friend of Wordsworth, who commemorated him in verse. He became blind when about two years old, but from his earliest days was devoted to natural history. His knowledge of wild flowers was extraordinary; by touching them with his fingers and tongue he was able to distinguish them readily, and attempts to puzzle him were unsuccessful. John Dalton, whose name we usually associate with the atomic theory, was a pupil of Gough; his plants are preserved in ten volumes in the Manchester Public Library. We are not quite clear that the writer has so accurate a knowledge of plants as these earlier folk possessed; anyway, we do not know what the "purple iris" can be which "towers over all" on the borders of the tarn, nor are we clear as to the "bugloss" on the edges of the bog. But this is a pleasant book to read, either in the quiet valley or the arm chair, and the author has done well to put his memoirs into print.

SELBORNIANA.

From a Window.—The list of birds seen by myself from the study window of this house now contains over fifty species, and may interest some of your readers. We came to the house in October, 1887, and the observations extend to the present date. The window is a large bow-window, opening to the ground, and facing due west, but with a good telescope or opera-glass (I always keep both so that they can be used at a moment's notice), one can see some distance to the north-west and south-west. The list of species is:—Missel-thrush, fieldfare, song-thrush, redwing, blackbird, redstart, redbreast, blackcap, willow-wren, hedge-sparrow, long-tailed tit, great tit, coal tit, marsh tit, blue tit, nuthatch (has bred three successive years in a nest-box on a Scotch fir twenty yards from the window), wren, tree-creeper, pied wagtail, white wagtail (once only), tree-pipit, spotted flycatcher, swallow, martin, sand-martin, greenfinch, hawfinch (I saw four at the same time one day last week), house-sparrow, goldfinch (a pair once only), linnet, chaffinch, brambling (we have had both these two species in swarms this winter), bullfinch, starling, jay, jackdaw, rook, skylark, wryneck, green woodpecker, greater spotted woodpecker, lesser spotted woodpecker, cuckoo, barn owl, kestrel, mallard, wood-pigeon, stock dove, turtle dove, pheasant, red-legged partridge, gray partridge, moorhen, and whimbrel. We often hear the tawny owl, but have never yet seen him, and can hear the nightingale almost any evening during the early part of May.

It will be noticed that two or three familiar birds are not mentioned, such as the goldcrest, white-throat, red-backed shrike, yellow bunting, and lesser redpoll; they all breed in the parish, but have not yet been observed from the window. Of magpies we have absolutely none, and though I am pretty sure I have seen one if not both species of crow, I am not certain. The most interesting bird mentioned in my list is the whimbrel, which I recognised when passing over on July 30, 1890; it was travelling from north to south, and calling repeatedly. I knew the whimbrel well, having seen it frequently, and shot it several times, both on the Norfolk and Suffolk coast.

Last year my brother compiled and printed for private circulation, a catalogue of the birds which have occurred in this parish, the total area of which is under one thousand acres. His list contained exactly one hundred species, to which I have since been able to add the reed-warbler. There are, of course, in this country, hundreds of villages, each a Selborne in itself, containing a variety of plants, insects, and birds, the existence of which is unknown to, and uncared for, by the vast majority of the human population.

Tostock Rectory, Bury S. Edmunds. JULIAN G. TUCK.

Bird Sanctuaries in London (p. 23).—The interest of such enclosures would to all be very great, but more especially perhaps to some of the many thousands of people who live in London, and never see a bit of real country or of natural woodland. Not a small benefit of such a protected piece of ground would be its health-giving tendency. One of the two joys conferred by a bit of wild wood is its fragrance. All the year round all sorts of sweet scents seem to reside in it; it is not only the fragrant blossom of hawthorn, honeysuckle, and wild hyacinth, that perfume the air, but the moss, the ferns, the very soil itself—all these give out wholesome influences. It is beautifully said that in spring it is as if the old earth were renewing itself; the scent of the flowers being most conducive to health. Hence the "bird sanctuaries" might become, by and by, small ozone factories for the great metropolis. Nor does it seem reasonable to object to the proposal as "too large an order." As to the outlay, it would be at the beginning mostly, and that in making the necessarily high fences both light and strong; the after keeping up of the enclosures could not entail much cost. Besides, perhaps some of the money now lavished on "bedding-out" plants could be spared. These borders are most pleasing to the eye from their variety and brilliancy of colour; still, they lack, owing to their artificialness, the ineffable charm and spontaneity—the *unconsciousness* of the natural wild wood.

Z.

NATURAL HISTORY NOTES AND QUERIES.

A Strange Sitter.—During the high winds which prevailed for some days in December last, a workman who was doing some repairs to the parish church brought me a fine barn owl, which, being disturbed from its ancient abode in the church, had attempted a flight by daylight, but being confused by the light, and unable to fly against the very strong wind then blowing, it came to the ground and was caught without difficulty. Its captor transferred it to his dinner basket, and, I suppose, considered what he should do with it; I am afraid that his decision was not exactly favourable to the captive, for when I inquired upon that point his captor said he "thought he should have him stuffed." This I am sorry to say seems the desire of most people in the country with regard to every beautiful and unusual bird that happens to come into their hands. I suggested as an alternative that I should like to purchase it, and in the evening allow it to fly away. Its captor thought it "seemed a pity to do that," but he eventually handed his fluffy captive over to me for the modest sum of sixpence—although I may say that in this part the traditional price of an owl is ninepence—so the owl was transferred, with much flapping of wings, to a large wicker basket, and on looking at it a few minutes afterwards I was surprised to see that it was apparently fast asleep, leaning against the side of the basket and breathing heavily. It looked so quiet and tame that it occurred to me that it might be possible to take a photograph of

it. So I accordingly set to work to arrange my studio for my strange sitter, a towel-airer doing duty for a posing chair, and a focussing cloth for a background. When all was in readiness I carefully sat the owl in position; he did not seem to approve of it at first, and rocked himself from side to side in a most ludicrous manner. But after a few minutes he resignedly sat still, but evidently strongly objected to the bright light in which it was necessary to place him, and therefore firmly closed his eyes and could not be persuaded to open them. I then exposed five plates upon him, three of which proved successful. The operation over, he was returned to the basket. The lid was left open this time, but he made no attempt to escape, and in a few moments was apparently fast asleep. I then left him undisturbed till the evening, and when I then visited him I found him sitting on the edge of the basket, from which on my approach he flew to the other end of the studio, but did not seem particularly frightened when I again caught him. I then carefully carried him to the churchyard, and threw him into the air, watching him fly slowly into a neighbouring fir tree,* where he sat, thinking no doubt of the exciting adventures through which he had passed during the day. The photographs were duly printed, and some lantern slides were made from the negatives, which proved a source of endless amusement and I hope taught a lesson in kindness to some hundreds of young people to whom they were shown this Christmas.

Ringmer. FRANK W. BURGESS.

Sense of Humour in Animals.—I was lately much amused by the behaviour of my Irish terrier. He is not a puppy, being over two years old; he sleeps in the scullery, has a warm bed made for him there in a large box. A few mornings ago the little kitchenmaid was in a state of great distress. All her stove brushes and cloths had disappeared from her stove box; she looked high and low for the missing articles. "Tartar," the terrier, curled up in his box, watched her attentively, looking in a particularly happy frame of mind, and she suddenly caught sight of what looked like the handle of a stove brush peeping out of the corner of his bed; she examined his bed, and found he had carried all her brushes there and covered them over with her hearth cloth, and was curled up on the top of them. Directly she turned him out of his bed he began to run about delightedly. He is not in the habit of hiding anything, so I am of opinion that he was playing a practical joke.

Berry Grove. HELEN WATNEY.

[We regret the omission of a large number of notes, owing to want of space.—ED. *N.N.*]

TO CORRESPONDENTS.

We must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

* The fir tree was one of those in the grounds of "Delves House" which formed part of the "fir grove" mentioned by the Rev. Gilbert White in one of his letters written in Ringmer.

SELBORNE SOCIETY NOTICES.

Annual Meeting and Conversazione on Wednesday, May 29.—Tickets of admission are sent to all members with this month's NATURE NOTES. Applications for further tickets, the supply of which is limited, should be made to the Secretary, and a stamped addressed envelope should be enclosed with each application.

Donation to Deficit and Leaflet Funds.—The Committee begs to acknowledge, with thanks, a donation of £1 5s. from Mr. and Mrs. Musgrave.

New Wild Birds' Protection Act.—Attention is again drawn to the leaflet on the new Wild Birds' Protection Act, by Rev. H. D. Rawnsley, which it is hoped will be widely disseminated. Price 6d. per 100; postage 3d. extra per 100. Attention is specially drawn to the fact that in those districts where an order has been obtained from the Secretary of State, it will devolve largely upon the Branches to see that the Act is energetically put in operation.

Field Club.—The following rambles have been arranged for May. The Hon. Sec., Miss E. J. Temple, will be glad to give any further information respecting them.

May 4.—Ham Common and Petersham. Meet at the Star and Garter Gate, Richmond Park, at 3 p.m. Mr. Wakefield to guide.

May 11.—Theydon Bois to Epping. Meet at Theydon Station at 3.30 p.m. (Liverpool Street, 2.41 p.m.) Paper by Mr. F. Coles.

May 18.—Banks of the Crane and Gravel Pits. Mr. Field to guide. (Waterloo Station at 2.30 p.m.) Meet at Hounslow at 3.6 p.m.

May 25.—Hendon and Edgware. (Moorgate Street (Midland) at 2.19 p.m.) Meet at Hendon at 2.53 p.m.

Council and Committee Meetings.—The Council will meet on May 7 and June 4 at 5.30 p.m. The Magazine and Leaflet Committee will meet on May 15 and June 19 at 5.30 p.m., and on May 15 will be followed by a meeting of the Conversazione Committee.

Hon. Secretaryship of Magazine and Leaflet Committee.—The Hon. Sec. having resigned, his resignation was accepted with regret, with an expression of thanks for his past services. Mr. Edward A. Martin has kindly undertaken the duties of the post in his stead.

NEWS FROM THE BRANCHES.

Clapton (Lower Lea Valley).—The members of the Field Club held the last of their Winter Social Meetings on March 23, at which Mr. W. Durrant read a most interesting paper, entitled "A Study in Natural History." The Annual General Meeting of the branch followed, at which the Report for 1894 was read, and officers elected for the ensuing year. A hearty vote of thanks was accorded Mr. Durrant for his paper, and to the Misses Barlow for the use of their school-room during the Winter session.

Farnham.—The Council hear with pleasure that a new Branch is in process of formation for this district, of which Miss Helen Marindin is the Hon. Sec. and Treasurer, *pro tem.*

BRANCH CONTRIBUTIONS.

	£	s.	d.		£	s.	d.
Richard Jefferies	0	12	3	Southampton	1	0	0
Rape of Lewes	0	12	6½	Markwick	0	2	2
Weald of Kent	0	9	0	Nottingham	1	11	4
North Somerset	0	14	0	Clapton	1	5	0
Cheltenham	0	6	6		£7	10	0½
Halifax	0	17	3				

Important.—Hon. Secs. of Branches who have not yet sent in either their contributions or their payments for magazines, &c., for 1894, are requested to kindly do so by May 6, in order that the Balance Sheet may be completed for the Annual Meeting.

Nature Notes:
The Selborne Society's Magazine.

No. 66. JUNE, 1895. Vol. VI.

THE POEMS OF GILBERT WHITE.

WORKS of pure lyrical beauty are not the ordinary growth of English literature. The creative mind of the western or modern nations is essentially dramatic, as that of the Grecian or antique is epic, while the lyrical style belongs chiefly to the oriental or primitive world. Among the English we find Shakespeare; among the Greeks, Homer; among the Hebrews, the Biblical writers—each of these three illustrating the highest intellectual abilities of their respective races. But by no means do these generic traits afford examples of perfect contrast. For the drama, the typical literature of the west, has flourished also in many eastern and classical communities, and the western world possesses, in addition to its dramatic Koh-i-noor, a countless number of epic and lyrical gems.

It is not difficult to see why the lyrical mind should be common among the primitive races, and comparatively rare among the modern. That experience of humanity in its simplest state, that instinctive perception of Nature, those Adamitic sympathies with all creation, which have been the privileges of none but the earliest men, would alone explain their supreme taste for the lyric—the poesy of the spirit of universal existence. The gloomy Teuton soul has no general disposition for this ethereal poesy, no facility, except in special cases, for this mingling of self with the inner consciousness of life. The Teuton soul prefers the practical drama or even the historical epic, and seldom, indeed, does there arise amongst us a truly lyrical author, whose words, echoing with the ancient voices of creation, remind us that mankind is not all that lives, and brighten our workaday world with some instinctive memory of earth's first freshness and joy.

Such a writer was the Rev. Gilbert White.

The *Natural History of Selborne* is one of our greatest prose lyrics. As a pastoral it ranks next to the *Complete Angler*, but excels it in breadth of mind and depth of nature-love. Byron's ironical couplet on Walton was not altogether without excuse; the cold-blooded, though probably unintentional, cruelty of the "Contemplative Man" has caused many a tender heart to shudder. White, on the other hand, never jars against the most delicate feelings; from first to last he is all mildness and peace; his love for animals soars far beyond the range of rod and gun. The gentle qualities of his work have made it dear not only to the lover of Nature but also to the lover of books. It is dearer at the present day than ever before, because its rural simplicity and genial calm are enhanced by the confusion and turmoil of modern life. Its total power for good is incalculable; one result is to be seen in the formation of the Selborne Society. So much for the position and worth of Gilbert White as the author of those immortal letters. It was expedient to regard him in this main aspect before passing on to consider his poetical efforts, for the lesser works of any writer should always be judged by the standard of his noblest accomplishment.

Poetry—especially lyric poetry—is the outpouring of the soul in its highest states, "the record," says one author, "of the happiest moments of the happiest minds." Nearly all our great prose-writers have been poets at heart, poets in will if not in practice, in capacity if not in faculty; scarcely one can be mentioned who has not occasionally turned aside from his wonted highway to worship, frequently in sweetest tones, at the shrine of the holier muse. These poetical diversions of theirs, even when trifling in themselves, should always be respected as the children begotten of the spirit whilst in an unusually intense or lofty condition, and therefore hereditarily endowed with the deepest and highest virtues or aspirations of their parent. Again, poetry is the hardest endeavour of every literary brain, though the achievement of very few: but a man's attempts commonly testify of his nature more truly than his successes. Let us, then, briefly review the poems of Gilbert White with the object of learning therefrom the principal beauties of his character.

He writes for the most part in the riming pentameter couplet, which was the fashionable versification of his time. He has the singular merit, rare among minor poets of the period, of absolute freedom from a false ring of Pope, Johnson, or Goldsmith; his general tone reminds us rather of Cowper and Thomson. As in his letters, he speaks in no man's voice but his own, but his originality, though distinct, is quite unobtrusive. His versification and rhythm are both decidedly good, and his rimes correct.

The most widely known of his poems is "The Naturalist's Summer Evening Walk," which, being addressed to Thomas Pennant as a letter, always finds a place in the popular editions,

and is usually introduced, as a specimen of the writer's verse, into literary miscellanies. This poem is written in a strain most fitting to the subject, and all inspired with the natural peace and warmth of its author's heart. It opens with a very pleasing passage, which, after aptly describing the evening habits of various creatures, touches on his "baffled search" into the mystery of the swallow's

> hid retreat
> When the frost rages and the tempests beat,

and comes to a conclusion with the praise of God. Then follows what may be esteemed the finest portion of all White's poetical works :—

> While deepening shades obscure the face of day
> To yonder bench leaf-sheltered let us stray,
> Till blended objects fail the swimming sight,
> And all the fading landscape sinks in night ;
> To hear the drowsy dorr come brushing by
> With buzzing wing, or the shrill cricket cry ;
> To see the feeding bat glance through the wood ;
> To catch the distant falling of the flood ;
> While o'er the cliff th' awaken'd churn-owl hung
> Through the still gloom protracts his chattering song ;
> While high in air, and poised upon his wings,
> Unseen, the soft enamour'd woodlark sings :
> These, Nature's works, the curious mind employ,
> Impart a soothing melancholy joy ;
> As fancy warms, a pleasing kind of pain
> Steals o'er the cheek, and thrills the creeping vein.

It is needless to point out in detail the beauties of these lines. Their poetic feeling and descriptive music must charm every reader, while the naturalist will be doubly gratified by their trueness to the well-loved and ghostly circumstances of night. The last four verses claim special admiration for their beautiful expression of a nature-lover's ecstasy, which is set forth in words so lively, so deeply imbued with profound sympathy, that they awake or create in the reader the sensations they describe. If once remembered and repeated by a true naturalist in the open night, they will recur to him again and again, until they echo ceaselessly in the soul, rousing it to holy contemplation. Like the poetry of Wordsworth, they tell us how their author had felt "the presence and the power of greatness," how, as indeed his whole book shows, he had learnt that nature is never a thing of naught to God, but that without the Spirit of God it is a thing of naught to man. This, assuredly, was the religion of White's heart ; and this poem is a witness of his simple faith.

The "Invitation to Selborne" is valuable, apart from its local interest, for the proofs it contains of the writer's love for his native place.

> Nor be the Parsonage by the muse forgot;
> The partial bard admires his native spot;
> Smit with its beauties, loved, as yet a child,
> (Unconscious why) its scapes grotesque and wild.

This homely pathos requires no comment save delight. From the concluding verses of the poem we may gather that White fully recognised his romantic temperament, and that his great spirit, like most great spirits, was not unconscious of its own greatness.

> Me far above the rest Selbornian scenes,
> The pendent forests, and the mountain greens
> Strike with delight.

In these days of bird and beast massacre, when the term "naturalist" is misused in every way and on every opportunity, it is pleasant to think that the chief of nature-lovers coined for us a name that has become the exclusive right of his true disciples. It is the constant duty of Selbornians to take care lest their proud title be usurped by the horde of murderers and devastators who at present disgrace the word "naturalist."

"Selborne Hanger," a winter piece, addressed "to the Miss Batties," affords a clue to the sociable geniality of the bard, besides containing some agreeable description. "The Rainbow" gives further evidence of his natural piety, and "A Harvest Scene" is a cheerful sketch, perhaps the most artistic of his poetical compositions.

With this we terminate our brief and inadequate notice. The poems do not evince any extraordinary genius, but they are by no means trivial; they are precious because they are lyrical, that is, full of the author's spirit; they are never barren, and at times bear golden fruit. To shed the spurious glamour of flattery upon the minor works of a great man is a practice—it can hardly be called a fault—as common as it is pardonable. But every word of a great man carries a pregnant meaning to the thinking mind; and not Selbornians only, but the general public also, may read many a happy lesson in the poems of Gilbert White.

GILBERT HUDSON.

Gold Fish (p. 77).—As one of your correspondents has remarked, the fact that gold fish are capable of feeling in some way may be proved by "simply touching one." It may often be observed, too, that the stamping of the foot upon the floor, or the slamming of a door the other end of the house, will cause the fish to dart from one side of the bowl to the other. But the point that one would wish to be more satisfied upon, is whether they are capable of feeling *pain*, or of suffering to any extent. One correspondent says that being cold-blooded does not affect the question of pain. This would *appear* to be so in some cases, though not in others. For instance, the writhing and twisting of a worm upon the slightest pressure of the foot will often suggest that it suffers agony. On the other hand, a frog, though heavily trodden upon, and though a limb may even be severed from its body, will, perhaps, appear quite unconcerned about the matter. I say *appear*, though that in itself is, of course, no proof that it does not suffer. C. E. C.

"CHINK."

VERY late one winter's night, eight years ago, in a terrific storm of wind and snow, we heard a bang against one of the bedroom windows. At first we took no notice, but when the sound was repeated we opened the window and a poor little drenched chaffinch was blown in. We picked him up and warmed him by the fire. Then came the question what to do with him? It was about eleven o'clock at night! We had not long been settled in our new home, and had no cages ready to receive storm-driven birds. But we bethought ourselves of a small meat safe which had done service in London, so we fetched it, put a little straw on the floor and a few crumbs, and placed the little chaffinch inside. This extempore cage we placed near the window.

The next morning we hastened to see Chink, as we call him, and found he had quite recovered from his fright, and was looking quite bright. He picked up some crumbs and hopped about the cage. As soon as the sun came out, we opened the door of his cage and Chink hopped out on to the snow-covered ground, then flew on to the railings quite close to the window and sang his little song. It was just as if he wished to thank us for his night's lodging. Ever since that day he has been a constant visitor to the house, very often accompanied by Mrs. Chink. He calls out to us whenever he sees us; as soon as the blinds are drawn up in the morning Chink appears and demands biscuits. When the windows are shut he will fly up just above the muslin blinds, flutter in the air for a moment to attract our attention, and then fly down to the ground to wait for the expected crumbs. Sometimes he comes as early as four in the morning, sits on the window-sill and sings out loudly. Needless to remark his wants are attended to at once. Sometimes on Sunday mornings Chink will wait for us to come out of church, sitting on the chestnut tree between the churchyard and the garden, and then will follow us up the path and wait patiently till we bring him some biscuit. He comes to eat crumbs off the table in the window, and encouraged by his example the other chaffinches come too, so that we have had three or four on the table together.

Chink is a very smart-looking little bird, with his gay plumage, and struts along quite differently from the common sparrows. His little wife is a dainty little bird, though her plumage is far more sober than her mate's, and she looks a mere skeleton by the side of the plump cock bird. One summer when we were sitting out in the garden, amply provided of course with provender for our dear birds, Chink came up as usual and attracted our attention by calling out. We threw him some crumbs as usual and were surprised to find he did not take them, but called out

again. He came up quite close to us, and then hopped back to the border near, and there on the edge were two fluffy young chaffinches, and Chink strutting about with an air of great importance. It seemed exactly as if he wished to show us his little offspring. He then picked up the crumbs and fed them. Sometimes he arrives with his beak full of little green caterpillars, but I suppose the little chaffinches like bread with their caterpillars, for Chink carts off a huge lump at the same time. Poor Chink gets much persecuted by the sparrows, who besiege him when he gets a lump of bread. They imitate his cry, and really their sagacity is remarkable, for they fly up to the window just as Chink does, flutter for a few seconds in the air, and then down on to the path. When the weather is warm and the sofa is drawn up close to the window, Chink will come on the window ledge inside the room and eat quite fearlessly. But I have never succeeded in stroking him, although in all other ways he seems so tame. His last habit is to sit in the basket hung out for the tomtits on the trellis work outside the dining room and sing to us.

The chaffinches disappear for about a month after their first brood, then return, and when the second brood is hatched and comes to a mature age, they leave for about two months or only appear at intervals. But about October Chink begins to come again pretty regularly. I do not know to what age small birds live, but we have known Chink for eight years. There can be little doubt as to his identity, as he has his special ways of attracting our attention and knows all the favourable spots for food. He has a last meal provided after the sparrows have gone to roost. We think his plumage is a shade less bright than the younger birds', the only signs of old age at present. I fear I must admit that, owing to our bounty, Chink has become a thorough little mendicant; but when you see him sitting on the window-sill or on the creeper close to the window, looking so smart and confiding, it is quite impossible to resist giving him something. Our visitors are at once attracted by the confiding little "chink" and petition for biscuits in their bedrooms in hopes of enticing him on to *their* window-sills. Chink shows full confidence that having once done him a friendly act we shall remain his friends for life.

A. M. GREENWOOD.

Summer Migrants.—I was rather surprised and disappointed not to see any reference in the May "Notes" respecting our summer migrants. My record is as follows:—Chiff-chaff, March 21; redstarts, April 10; willow-wren, 11th; swallows, 11th; yellow wagtail, 12th; ring ouzel, 11th (shot as a "rare" bird); cuckoo, 17th; titlarks, 17th; whitethroat and lesser whitethroat, 18th; grasshopper-lark, 20th; nightingale, 23rd (one was heard in the neighbourhood a week before date); corncrake, blackcap, whinchat, and sedgewarbler, 28th; sandmartins, 29th; May 1, housemartins; garden-warbler, 7th.

Astwood Bank, Worcestershire. J. HIAM.

A MAY SONG.

Over the hill to the Derwent valley
Comes through the showers and flowers a Queen ;
The man leaves the mill and the child leaves the valley
To meet her, and greet her, and dance on the green.

Tassels of velvet the poplars have wrought her,
Daisies have proffered the silver she loves,
The ash of the Norsemen a sceptre has brought her,
That scatters the dust of fine gold as she moves.

Daffodils linger her harness to brighten,
Brooches of primrose her bosom adorn,
All April gems in her coronal lighten,
Rubies from larch tresses, pearls from the thorn.

Courier in front of her, flies the glad swallow,
Pigeons clap cymbals, bees drummer-boys are,
Redstarts for liverymen flicker and follow,
Cuckoos cry "Look you," the Rooks call "Hurrah !"

Every sweet bird of the wild woodland chorus
Sings to the people "Rejoice ! Rejoice ! "
The Queen of the May who is going before us
Brings a new word to us, hark to her voice !

"Once in the year is the May-time given
To tell to the saddest our glad old earth
Is a fair free place for the Kingdom of Heaven
If man will be wiser and harmless in mirth."

See, from the hounds how the gentle hare hurrying
Hides in the folds of the May-Queen's dress,
How the poor rabbit those cowards were worrying
Leaps to her lap in his sore distress !

Look, in alarm, from his cage the deer speeding
Hardly escaped from the hunter's hand,
Scarred by fierce teeth, from the cruel barbs bleeding.
Lies at her feet and is licking her hand !

Forth from her hood lo, the tawny Owl peeping,
Kestrels are fearlessly perched on her wrist,
For they know that man's helpers are safe in her keeping,
And the Buzzard stoops down from his height to be kissed !

Queen of joy, duly our vows would we render
Hail to thee, royal one, loyal we call ;
Eyes to see truly, a heart that is tender,
This is the homage thou claimest from all.

Maying-time, playing-time, Heaven-time, earth-time,
Bird-time, and herd-time, oh pass not away
Till love for all living, and innocent mirth-time
Crown thee, by Derwent, the Queen of the May.

H. D. Rawnsley.

JUSTICE TO THE CANARY!

IT is almost a truism to say that one is sure of a treat in any article signed with the honoured name in literature of Mr. Edmund Gosse. His bright and animated review* of Miss Benson's charming book, *Subject to Vanity*, is no exception to this rule; but its literary merits will scarcely suffice to mollify the wounded feelings of those readers who practise the "cult of the canary"—to use Mr. Gosse's own phrase—for the levity of his remarks anent that interesting but too frequently misunderstood bird.

Poor little canary! his fate is indeed hard. More than any other feathered fowl he is the victim of civilization. Acclimatized to hot rooms, his inheritance is captivity; we lords of creation have made him an artificial being; breeding and selection have modified his form, and introduced limitless variety into his plumage. We have cultivated his talent for singing till he is as much a masterpiece of art as a prima donna in the latest fashion by Worth. And yet—we humans are a stupid race—how little do we really understand the quaint, lovable and affectionate little bird-soul that dwells inside the canary's green or yellow coat! Nine canary keepers out of ten, if they give their victim—I cannot say pet—seed and water and an occasional bit of groundsel, think they have done all that justice or mercy can require; as if they themselves would like to be kept on a perpetual diet, say, of mutton and cabbage. They take no interest in the canary, and he naturally returns the compliment and expects no good from them; but solaces himself in his purgatorial existence with song, and an occasional conversation with the sparrows, if he has luck enough to be at an open window.

There is no ground for repugnance at the sight of a caged canary, such as anyone with sense and feeling must experience at the spectacle of the piteous caged thrushes and blackbirds, which are so unhappily popular among our peasantry, or, worse still, the hapless skylark, imprisoned in a limit of a few inches, beating his wings against the wires, in vain remembrance of his heavenward flights. The canary, on the con-

* Nature Notes, 1895, p. 61.

trary, is born and bred in captivity, and can live out his little life happily in a cage. But the wonderful thing is that so few people in choosing a cage give the slightest consideration as to its fitness for the little inmate. If they are lavish in their expenditure, they take it out in tin roofs and pinnacles and bells, no matter that the light of day is thereby more or less obscured. The surface of the roof is ornamentally arranged in concaves, to the further discomfort of the canary. As to the question of how he is to get at his food, that is of the utmost insignificance, compared with the primary object of having the cage as smartly ornamental as possible. Paint and gilding are liberally applied, and the canary beguiles his *ennui* by picking them off, to the detriment of his digestion. Any notice of the structure of his foot, or the diseases to which it is liable, in regard to the make and arrangement of his perches, never enters the mind of the average canary keeper—but of this more anon.

If the choosing of the cage be limited by parsimony, then—plus all the disadvantages I have noted, except perhaps the bells, which are an extreme luxury—the cage will be a four square of about ten inches—or worse still, a cylinder in shape. I wish that all who are guilty of this last atrocity might expiate their own sins inside a similar instrument of torture. Such are the wrongs of the canary at the hand of mankind; then, to add insult to injury, a clever man comes along, and derides him for his bad taste in cages. "Lower middle-class refinement!" quotha! "small gentlemanly residence"! "Do I have one chance in a thousand of choosing my own house?" the canary might pertinently retort. And these wise men are so sweeping in their generalizations. Mr. Gosse's short method with canaries reminds us of the psalmist's impulsive judgment on his fellow men. But the grievous thing to a really impartial mind is that he lets himself be so blinded by the phantasm canary of his own imagination as to be incapable of perceiving, in the bold and beautiful portrait of Miss Benson's "Jack," what is patent to any one who has ever been honoured with the intimate affection of a canary—that he is all his mistress's fancy paints him.

A canary-lover of many years' standing, I look back with gratitude to many little green and yellow friends all bright and interesting and intelligent in their different ways; for there is as much variety in the character of canaries as—*pace* Mr. Gosse—in the colour of their plumage, which is by no means the uniform tint he would have it. There was Zoroaster, so named through an unfortunate misapprehension of her sex, a lovely, fluffy, golden ball, who loved to parade up and down in front of the looking-glass, a thorough little coquette, full of airs and graces. She had much force of character withal, and had to the full that autocratic temper which is a great feature in tame and fearless canaries. To her mistress she was always a benevolent tyrant, coaxing, wheedling, and threatening by turns; but her attitude towards Frenchman Johnnie, her meek little spouse, was

decidedly less commendable—indeed it was suggested that in view of their matrimonial difficulties her name should be changed to Xantippe. Johnnie was an excellent family man; his conduct as a husband and father was irreproachable; the one little blemish in his otherwise spotless character was a very pronounced bias in favour of alcoholic refreshment. Sherry on sponge cake, he said, was not to be despised, but brandy was a drink for the gods. Brandy was a conspicuous feature in his diet towards the end of his life, and its effects were amusingly apparent in his demeanour, which became very genial under that inspiring influence. He lived to extreme old age, grew very bald and feeble, but enjoyed life to the last.

Time would fail me to tell of Greenie, a long-lost wanderer who, evidently sick of liberty combined with starvation, hopped in at a window one night, installed himself a permanent member of the household, and—to quote the admiring verdict of the servants—was "as deep as any Christian"; of Angelo Jim, of Kralievic Marko, a gallant knight of Malta, who still gladdens the earth with his presence and sings the song of his far-off island home. But Nemo, the incomparable Nemo—the present potentate of my canary-ridden existence—cannot be dismissed as a mere name. It was a case of love at first sight on Nemo's side. He had a happy home, plenty of liberty and a good mistress. He was an accomplished fellow who could whistle a tune, to say nothing of having a pretty and not too shrill song of his own. He promptly transferred his affections to his present mistress, a frequent visitor of his owner, who kindly consented that whither his heart had gone his body might follow. He is a bird of immense force of character *even for a canary*, and a valiant man of war. His feelings were outraged by the introduction of a Brazilian paraquet, whose size and formidable beak did not overawe him in the least, and it was impossible to leave him alone in the room with Rio, as he would certainly have fallen a victim to his own thirst for battle. The only time when he even failed in sympathy for his mistress was in her grief over the sudden death of Rio in the flush of youth and beauty. He is on the worst possible terms with Kralievic, and few days pass without a pitched battle after a truly Homeric exchange of defiances. It is very funny to watch them yelling the preliminary war songs down each other's throats, and the damage is utterly disproportionate to the rancour of the combatants, being at most a feather plucked out, or a bitten toe. A bald head is a great source of interest to Nemo; he delights to promenade on it, and with a well applied tweak of his bill to curl up the receding hairs on its outskirts, not entirely to the comfort of the owner thereof. An alarm clock on the mantelpiece of his mistress's room is, next to Kralievic, the object of his fiercest aversion; he fights his reflection in its metal sides, and replies to the alarm with his most ferocious battle song.

But the whole affection of that little bird heart, as vigorous

in love as in warfare, is centred in his chosen mistress. He picks dainty quarrels with her, to be followed by the tenderest caresses, being apparently of the poet's mind that

> Falling out of faithful friends
> Renewal is of love.

If she goes in or out of the door he has his little joke of pretending to escape, though when, on three different occasions, an unintentional exit was provided, he scorned to take advantage of it. In the society of his dear mistress the feathered Lovelace sings,

> Angels alone that soar above enjoy such liberty.

Twenty people may traverse the corridor to his room, but his call-note greets her footsteps alone, and if she has been away from home, the ecstacy of delight with which he greets her return is lovely to behold. *Ad multos annos*, O my Nemo!

In conclusion, I would urge all who keep canaries, even if they take no pains to draw out their quaint character and intelligence, at least to study their nature sufficiently to enable them to provide suitably for the comfort of their pets in the matter of housing and food. The cage should be of oblong shape, not less than twelve inches in length—more, indeed, for birds that are never let out to fly. The top should be dome shaped, with open wirework. Never take a cage with a sheet metal or wooden roof, and eschew all painting and gilding. The perches should be square with the corners bevelled off, and an inch and a-half in circumference; the slender round perches in general use produce cramp in the feet, through keeping them at too great tension, to say nothing of the risk of entangling the claws, which often are very long. The vessels for seed, whether inside or outside the cage, should be easily accessible to the bird; glasses with a round hole for the head are detestable. Boxes hung outside are the best, as there is not the disturbance of shy birds caused by putting in the hand, and the seed and water are not so liable fouling or waste of seed and water. As to diet, I preach variety. Canary seed for the staple, but in conjunction with hemp, rape, millet; and the same applies to green food, which may include primrose blossoms, dandelions, chickweed, water-cress, lettuce, shepherd's purse, and seedy grass. Groundsel, much in favour as it is, is at any time the least advisable, though many birds are very fond of it. To delicate or sickly birds it is positively injurious, and should never be given in cold weather. Fruit is a great treat to canaries, but should be given in small quantities, and never left to decay. A fresh strawberry or cherry is generally eaten up, and a bit of pear or apple is occasionally good.

The taste of birds differs very much—some like one thing, some another best; but if it is worth while to keep a canary it is worth while to feed and care for him well, and the result of such care

is at once manifest in his plumage and song. On the other hand many people ruin their canaries by an amiable desire for their comfort, but not "according to knowledge." I was once consulted about a sick bird, wheezy, languid and heavy looking, his breast bare and inflamed, his plumage dank and without gloss. On inquiring into his diet I found that he had been taught to acquire a taste for roast mutton and suet pudding! I also on one occasion rescued Frenchman Johnnie, just in time, from the hands of a well-meaning friend, who had undertaken to guard him for a month in the absence of his family. She kept him in a very hot room for fear of his catching cold, in July; pulled the blinds down because she did not like a strong light, and attributed the same taste to him; and fed him largely on maw seed, because he seemed to like it! An open window, green stuff galore, and a taste of castor-oil brought him round, but it was a narrow squeak for his life. Truly, the tender mercies of the ignorant are no improvement, in practice, on those of the wicked, however much they differ in intention.

HENRIETTA E. WALTON.

TWO BUTTERFLY BOOKS.*

IN the old "Jardine's Naturalists' Library," the forerunner of the present series, a volume was devoted to British and another to foreign butterflies. Mr. Kirby, to whom the entomological part of the new "Naturalists' Library" has been entrusted, has wisely shrunk from adding another to the portentous list of works on British Butterflies alone, and in the volume before us we have the first part of an attempt "to make the British Butterflies illustrate and lead up to a study of the Butterflies of the World." The result is an extremely handy little treatise, which certainly, as writers of school-books are wont to remark in their prefaces, "supplies a want." As the author tells us in his preface, "the present volume is devoted to the great family *Nymphalidæ*, which, with its sub-divisions, includes about half the known butterflies;" the next volume "will contain the remaining families, and will thus complete the subject, so far as the butterflies are concerned."

In the introduction we have a general account of the external structure of lepidopterous insects, especially butterflies, in their various stages. Several pages are devoted to collecting, and there is a useful section on geographical distribution, while we are especially pleased to welcome a translation by the author of a most interesting account by M. C. Piepers of the habits of butterflies and moths in the Dutch East Indies. In his remarks on the pupa, Mr. Kirby might have mentioned the researches of Jackson and Poulton, which show how the sexes can be distinguished in this stage; while, moreover, we are told nothing about the interesting subject of venation until the wings are found in the perfect

* *A Handbook to the Order Lepidoptera* (Allen's Naturalists' Library); by W. F. Kirby, F.L.S., &c., &c. Part I. Butterflies, vol. i., 8vo, pp. lxxiv. and 261, with 37 plates. London: W. H. Allen & Co., 1894, price 6s.

Butterflies and Moths (British); by W. Furneaux, F.R.G.S. With 12 coloured plates and numerous illustrations in the text, 8vo, pp. xiv. and 358. London: Longmans, Green & Co., 1894, price 10s. 6d. net.

insect. Possibly the author considers this question to be still *sub judice*, and therefore out of place in a work of this character.

On turning to the main, or systematic portion of the work, we observe that an attempt has evidently been made to bring the text up to date, and we notice with pleasure that such recent authorities as Schatz and Röber are quoted. After preliminary remarks on classification, and a diagnosis of the families of butterflies according to the authors just referred to, Mr. Kirby proceeds to give us a systematic account of the chief genera of the family *Nymphalidæ*, with descriptions of the British forms and of one or more species of each exotic genus mentioned. Useful notes on metamorphoses, habits and distribution are also added. A considerable synonymy is given of each species mentioned, but we are inclined to think that a small bibliography of the most important systematic works on the subject would have been better suited to the needs of the majority of readers. On p. 196, in stating that the iridescent colours of the wings of *Morpho* and other butterflies are due to "refraction (*sic*) from the edges of the scales," Mr. Kirby is guilty of the repetition of a previous error. Apparently the author does not realise the difference between *re*fraction and *dif*fraction. As to the coloured plates with which this volume is embellished, or at least the majority of them, we can say little that is complimentary, and we cannot agree with Mr. Kirby when he states in his preface that "it was desirable to use the plates of the old 'Jardine' series." Such pictures may have satisfied the generation for which they were intended, but nowadays they make us shudder. Since the publishers appear to pride themselves upon their pictures, we venture to hope that, should a second edition of the present work be called for, as we trust will be the case, they will see their way to cancel the whole of the present series of plates and replace them by others which shall be specimens of modern chromo-lithography worthy of the subject.

Mr. Furneaux's book, besides being attractively got up, well printed, and on good paper, is carefully and at the same time pleasantly written, while the illustrations, although some of the plates are a little over coloured, are remarkably well done. The large number of woodcuts, both of apparatus and insects, are new and delicately cut, and in conjunction with the coloured plates afford faithful illustrations of the whole of the butterflies, and many of the more conspicuous moths besides. In the first sixty-one pages we have an interesting general account of the structure and habits of butterflies and moths in their various stages, while the concluding chapter of this part gives us an introduction to their classification. A useful table on p. 35 shows the disposition of the appendages and spiracles on the segments of the caterpillar. We wish that in his remarks on classification the author had included a synoptical table of the characters of the species; this would not have entailed any great amount of labour, while it would have increased the practical utility of the book.

The second portion of the book is devoted to "Work at Home and in the Field," and is extremely well done. Clear instructions as to the method of making nets, collecting-boxes, and other impedimenta are given for the benefit of ardent spirits whose pocket-money is not commensurate with their enthusiasm, while after chapters on collecting the perfect insects and their previous stages, we have others on rearing and setting, winding up with the arrangement of specimens in the cabinet. A chapter on preserving larvæ, concluding with the injunction—"Never refuse a place to any object that relates something of the life history of the creatures you are studying," deserves special mention. The sentence quoted is instinct with the spirit of the true naturalist, and is heartily to be commended. Indeed, we are pleased to recognise that throughout the book the author consistently endeavours to foster a love of observation in the open air, showing that the creatures of which he writes are not merely pretty patches of colour, but have each a story to tell, and thus enforcing anew the lesson we learnt in our youth from the delightful old tale of "Eyes and No Eyes." As many of those who will become possessors of this book doubtless live in London, while even their country cousins occasionally get the chance of paying a flying visit to the Natural History Branch of the British Museum in the Cromwell Road, we wish the author had made passing allusion to Lord Walsingham's magnificent collection of British Lepidoptera, with their larvæ and food-plants, in that institution. Nothing more interesting or useful to the young entomologist, or better calculated

to make him long to know more of the life-histories of our butterflies and moths could possibly be imagined.

The last half of the book is occupied with the description of the butterflies and larger moths, while there is even an introduction to the study of the micro-lepidoptera, with figures and descriptions of a selected series of species. Finally, in two appendices, we have a complete classified list of British Macro-Lepidoptera, according to South, and the Lepidopterist's Calendar already referred to. The book is one that should find a place in the Natural History Library of every school, and we heartily recommend it to those of our readers who are of an entomological turn of mind. Author and publishers alike have done their work well, and are to be congratulated on the result. We observe that this volume is to be followed by others dealing with various sections of our native fauna, to the appearance of which we look forward with pleasant anticipation. If the same standard of excellence is maintained, the succeeding volumes will certainly receive a hearty welcome.

NATURE KNOWLEDGE?*

THE object of this book is stated in the preface. In this the author tells us that it consists of the "expanded notes of class-lessons given during the past quarter of a century, and has included some of the results of recent travel and research." We might have inferred the exact date of the class notes from two or three statements in the book. The Rhine ceased to be "in part the boundary between Germany and France" exactly twenty-five years ago; and the statement (p. 166) that the Albert Nyanza "is at least 300 miles long," and that the Nile rises from it, would also have been excusable at the same period. But the author would have been much behind the times even then, when he adds that the Victoria Nyanza is shorter, and that from it "another branch, the White Nile, is thought to originate."

The next paragraph of the preface tells us for whom the book is written, and that it will give an idea of the extended treatment adopted by "the great geographers," of whom he enumerates five, including Mrs. Somerville and Ansted! He tells us that he "by adding copious extracts from travellers and eye-witnesses, as Humbolt, Kingsley, and Livingstone, of the scenes they depict, and by dealing with natural phenomena in relation to human affairs, it is sought to increase the attractiveness of the subject." We do not quite understand what is meant by extracts of scenes; but we suppose that the desire to relate the book to human affairs is the excuse for the long and rhetorical description of a skating scene on pp. 237-238; the "deep responsive growl of the ice" is echoed by the reviewer, who has to wade through such unnecessary additions to the amount of padding in the book.

The preface then goes on to say that "Footnotes support the text, affording more detailed information for the use of students preparing the study of physiography for the various public examinations." We should like to know at what public examinations it would help a student to know that Cavendish always placed his walking stick in one of his boots (p. 204), or that Columbus was ruddy-faced with auburn hair, and that when he contracted his eyebrows he almost frowned (p. 6). Nor is it wise to encourage examinees to quote Martin Tupper (p. 10).

"The illustrations will also, it is hoped, stimulate to a keener appreciation of natural beauty in the world around us." Many of them do—by contrast. The figures, however, are certainly the best part of the book, but it would also stimulate a keener sense of honesty if the author had acknowledged their sources.

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* *Short Studies in Nature Knowledge: an Introduction to the Science of Physiography*, by William Gee. (Macmillan, 1895, 8vo, pp. xiv., 313; with 117 illustrations.)

The author ought to know that it is as unfair to use figures without saying whether they are borrowed, as it is to make unacknowledged quotations. The illustrations, moreover, have not improved by being quoted. No 8 is said to be the "Glacier of Zermatt," and is referred to in the index as "Zermatt Glacier," but it certainly is not; it may be a bad view of the Findelen Glacier, but it is not the Zermatt Glacier. Fig. 39 is said to be "a sea in which nothing can live," an unnecessarily incorrect statement; fig. 65 is said to be of the Albert Lake—probably the Albert Nyanza is intended, and not the Albert Lake, which is in Australia.

The text consists very largely of quotations, from the most diverse sources; the most up to date is a reference to a musical composition of the Emperor of Germany (p. 213). The part supplied by the author is full of blunders; he says that temperature of the water is the cause of ocean currents (p. 100); that the bottom waters of the Mediterranean are not cold (p. 99); that Nansen *is* preparing an expedition to the Pole; that the cool summers of England are due to the Gulf stream; that the word island etymologically means "water-land;" he twice goes out of his way to say that the Calliope has "10,000 horse-powers" (as he calls it), whereas it should be 3,000. He tells us that Lake Geneva is troubled by "subaqueous winds;" that the reputation of the Droitwich springs is two thousand years old; that the channels into atolls are sometimes 1,000 feet deep, while he regards a polypidom as the same thing as a reef. In the interest of physiography students we would suggest that for the present index should be substituted one to the illustrations and extracts, and that the book then be re-issued as a dictionary of miscellaneous quotations.

J. W. G.

THE SURREY HILLS.*

THE bare announcement of the publication of another of Mr. Walker Miles's practical little handbooks will be enough to make those who delight to follow in the well-planted footsteps of the master of recreative pedestrianism, hasten to buy a copy, fully confident of the excellent value they will get for their money. But to the unitiated who are not numbered among Mr. Miles's disciples it will be necessary to give some particulars of the service which that author has rendered to all who are willing to accept it, by his selection and clear description of a series of walks in the most beautiful district in the neighbourhood of London. The Surrey Hills series is the republication in one cover, with much important supplementary matter, of four separate parts, three of which have already been noticed (NATURE NOTES, 1894, pp. 112, 193), while the fourth appeared about a month ago. The last contains 112 pages and an excellent route map extending over an area of some 70 square miles of the picturesque country which surrounds Guildford. Suffice it to add that it reaches that high level of perfection which has characterized all Mr. Miles's previous contributions.

The skilfulness with which these little guidebooks have been compiled is surprising. They are quite the best thing of the kind that has ever been done —in fact the author's method is one which could not well be improved. In dealing with a given district he evidently begins by making himself acquainted with every possible path and road; and then, rejecting the dusty highways, and indeed all roads as far as he can, he joins together the most attractive and unfrequented paths into walks of convenient length which may be broken off at railway stations lying on or near the route, or combined into longer stretches, or varied *ad lib.* by means of the alternatives given in the footnotes. He contrives to take you to all the finest points of view (for he has a keen eye for panoramic scenery), and by calling attention to every visible spot of interest, gives you an excellent notion of

**Field-Path Rambles amongst the Surrey Hills*, by Walker Miles. (R. E. Taylor & Son, 19, Old Street, E.C. Price 4s. 6d., pp. 347; 5 maps.)

the geography of the district; and withal so precise and clear are the directions that the rambler has has only himself to blame if he loses his way. An extremely useful feature of these books is the insertion in the text of artificial milestones, which are printed in black type and show the traveller how far he has walked, thus enabling him to calculate his chances of catching a desired train at the end of his ramble. Another point which, so far as I know, has not been taken up by Mr. Miles or his reviewers is that, as the routes are described for one direction only, you can, after mastering them in this direction, test the value of your acquired knowledge and at the same time you can double the practical utility of Mr. Miles's work, by taking the walks in the reverse direction, for this purpose relying on the vividness of your own recollection of the paths previously traversed, if your geographical memory be a good one; or, if unable to trust your unaided memory, you can refresh it by a free use of the admirable maps supplied by the author, and by gleaning from the text such hints as are likely to put you in the right way.

But to return to Mr. Miles's present publication. The Surrey Hills series treats of a most charming tract of country, measuring twenty-four miles from east to west, and ten from north to south, that is to say, from beyond Redhill to beyond Guildford, and from Leatherhead to Ockley, with Dorking near the centre. It contains a network of some three hundred miles of carefully described walks, which are as admirably suited for those who may spend a few weeks' vacation in the district as for the overworked Londoner who is wise enough to make the most wholesome use he can of his infrequent Bank Holiday. For the benefit of the former class Mr. Miles has appended a scheme of suggested tours lasting a week or fortnight, and providing a daily walk of either not more than ten or not more than fifteen miles, and ending each day at some place where a night's lodging is most likely to be obtained. To nature-lovers such as all Selbornians are, this scheme of walking tours ought to recommend itself very strongly, for there is no other district within such easy reach of London where wild nature is wilder or more natural. The nightingales just now are so numerous and noisy as to be almost a nuisance. There are many unenterprising folk who are accustomed to spend their holiday year after year at the seaside, where they vary the monotony of existence by enduring the pangs of *mal de mer* at so much an hour in a so-called pleasure-boat. Mortals of this description would do much better to drop this habit of drowsing away their holiday at the seaside and to take lodgings for a month somewhere in the Surrey Hills, actively exploring the neighbourhood, and vainly, but laudably, attempting to exhaust its lavish natural charms of upland, wood and dell. They will find it to be rural England at its very best, and yet so near to London as to afford most of the luxuries of modern life.

It will be a great source of gratification to Mr. Miles's *clientèle* to know that he is preparing yet another series of rambles—the Surrey Hedgerows, which will exploit the country lying outside that which forms the subject of the Surrey Hills series. The first part will include Croydon, Caterham, Epsom, &c., and thereby will link the latter series to the author's earlier venture—the West Kent series.

A. GEPP.

SELBORNIANA.

Fur and Fashion.—I should like to call the attention of the members of the Selborne Society to the following, cut from the *Sun* of December 13:—"One of the queerest companies recently started is that formed to breed black cats upon an island in the Paget Sound. Cats imported from the Netherlands will be used in breeding, and the animals will be fed on fish. A large profit is expected from the skins." Surely the encouragement of the increase of animal life, to be taken for the gratification of an extravagant, and in this country unnecessary fashion, is scarcely warrantable. It is painful to consider the daily slaughter that takes place

in animal and bird life for our food supply, many of which animals have the most beautiful fur; but in this there is no waste, the carcase is wanted, and if the skin can be put to any practical use so much the better; therefore, economically considered, it must be very wrong and culpable to add another to the already long list of our victims.

Through the steps taken by a few right-minded persons, a check has been put to the wholesale slaughter of small birds for decorative purposes, which has been, and is, a reproach to our generation. Can we not, therefore, do something to arrest this still greater evil that is threatened? I say greater, in that it is worse because of the encouragement given to reproduction for no other purpose than the using of so small a part of the subject. Then again, how will these cats be killed? Will their skins be removed in the same way that we are given to understand those are of the best specimens of our pets, which often disappear round about London, viz., when still alive or partly conscious? It is not necessary to detail the case, but proof of this not long since came under my notice; it is scarcely reasonable to suppose that those who would stoop to such a traffic would hesitate to present their goods in the most marketable form and to the best advantage, although that would mean untold further suffering.

A. J. B.

Fashions and Feathers.—Will the bird murder so long fostered by fashion ever abate? I send you two extracts from a recent number of the *Morning Post*. The first is from a description of the "Battle of Flowers" at Eastbourne (surely a culpable waste of the beautiful things of nature), and the other is from an account of a wedding in high life: "One of the prettiest vehicles was a tiny goat-chaise trimmed with pink and white flowers, and having a canopy to which stuffed, white-winged birds were attached. . . . For this tasteful entry Mr. —— received a silver tea-service given by the proprietors of *The Gentlewoman*." "The bride's travelling dress was, &c., &c. . . . a Marie Antoinette toque of white satin, having a large black osprey at the side."

A. L. H.

I am glad to say that the barbarous fashion of wearing feathers in hats, &c., has, thanks to the laudable efforts of those who are interested in bird-life, considerably decreased; there is still, however, much room for further improvement. During the last two months I have succeeded in persuading three ladies to give up this custom. This may seem a very small thing, but if everyone would make up his or her mind to convert one woman a month the effect would be enormous. I am sure a great part of the feather-wearing women are ignorant of the cruelty they cause. I know one who all through this terrible winter fed the birds three times a day, and yet did not think it at all inconsistent to wear a swallow in her hat

Staines. GRAHAM W. KERR.

Wild Nature.—We have now what has long been a *desideratum*—an edition (the sixth) of Mrs. Brightwen's *Wild Nature won by Kindness*, for eighteenpence, bound in cloth flush, with all the illustrations of the 5s. edition. We shall be surprised if in this form it does not find its way into every school library that does not already possess it, and obtain a further circulation as a prize in Bands of Mercy as well as in schools. Mr. Fisher Unwin may expect a seventh edition to be called for ere long: but it must be a cheap one, for this is emphatically a book for the people.

A Visit to Gilbert White.—On looking through a chest of old family papers, I have discovered a diary of a visit to Selborne, in 1763, written by my great-grandmother, Mrs. Rashleigh, the wife of John Rashleigh, Esq., of Penquit, Fowey, Cornwall. It is entitled "A Little Journal of some of the happiest days I have had in the happy valley, in the year 1763." The writer, *née* Miss Katharine Batty, was visiting her relation Mrs. Etty, the wife of Gilbert White's friend, the vicar of Selborne from 1758 to 1784. She gives an interesting account of Gilbert White and his friends. This journal will probably be published shortly in *Longman's Magazine*.

RASHLEIGH HOLT WHITE.

Under the title "Bird's-eye Views, New and Old," Mrs. Green has begun in *New and Old* a series of articles on our common birds, which, judging from the first, will be bright and interesting. Mrs. Green, whom we are glad to reckon among our contributors, is an original member of the Selborne Society, and all that she writes will be in accordance with the spirit of that association.

NATURAL HISTORY NOTES AND QUERIES.

Where are the Tits? (p. 57).—Here they are—at Malvern Wells. Great tits, tom tits, coal tits, and little marsh tits come and go the livelong day. They have been with us through the intense frost, five of them frequently clinging to the fat that is ever to be found hung from a stick by a sitting-room window. They are indifferent to position evidently, clinging back or head downwards; no matter—while fat remains tits attack it industriously. In a quiet side window hangs a terra-cotta bowl well supplied with the dainty, and known only to tits, robins, thrushes, and a nuthatch. Sparrows come not there, but tom tit sits long and often in it, while his companion peeps over its edge or clings to the angle of the house wall watching an opportunity for a feed. Robin with open beak will charge an intruding great tit, and sometimes a thrush with proud mien and startled air will stand on the edge of the bowl before making a dash at its contents. The nuthatch, not seen before this winter, made it his feeding-ground, but he fled with the melting of the snow. Chaffinches, glorious in colour, during the frost sat on the window-sill holding the bold sparrow at bay. Thrush and blackbird made it their almost hourly haunt. The starlings came. Attracted one Sunday morning by a row of many birds sitting in the snow that covered the holly hedge, and hearing a strange worrying sound outside the window, we went to it to know the cause. Up flew a dozen starlings. They held the window-sill and its precious bird-breakfast of bread and seed. The face of the earth changed. The air was full of sound. Bird-life was chanting a thanksgiving—the frost was departing. Let "X." be happy—the tits are here with us still.

Malvern Wells. Y.

Aviary (p. 76).—May I suggest some favourite tit-bits for the little captives? For the greenfinch, oats; goldfinch, ripe thistle heads; redpoll, little bits of nut; siskin, nearly ripe alder-cones; and for bully, apple (not forgetting the pips), cherry, strawberry, and occasionally a few tiny caterpillars or green flies.

H. B. R.

A Word for the Cuckoo (p. 77).—May I venture to suggest that your correspondent, "C. C.," has hardly considered all that is implied by the theory put forward as to the cuckoo's parental affection? It seems to come to this—that when the cuckoo lays an egg she makes a note, mental or otherwise, to this effect:—"April 20.—Laid an egg in hedge-sparrow's nest in such a place. Memorandum: though I never sat myself, I have reason to expect, 'from information received,' that it will be hatched in about a fortnight. I mustn't forget to look round and inquire how the dear child is getting on, and to thank the foster-parents." Mr. Johns tells us that the number of eggs laid by the cuckoo is variously estimated from five to twelve. I suppose that on "C. C.'s" hypothesis a separate "memo." is made respecting each egg, and the parent cuckoo calls at each nest, not to bring food, but to make a pretty speech, something like this: "Dear me, he's the image of his papa! It is most kind of you to take so much trouble." Is it not a more simple and probable supposition that a second cuckoo came to the same place as the first with the same intention, viz., of laying an egg? The small birds in such cases, I think, usually show excitement and alarm.

Otham Parsonage, Maidstone. F. M. MILLARD.

Jay at Window.—Mr. Knightley's account of a spotted woodpecker amongst the birds which came to his windows to be fed (p. 73) is very interesting and, I imagine, very rare; but we had a bird almost as rare amongst our visitors

for the morning meal of meat and crumbs, viz., a jay, which came several times, not only to the food placed on the ground, but also to the fat which was hung under the verandah. It did indeed seem strange to see this great bird trying to hang on like the tits to the suspended fat.

Cliff Cottage, Melbourne, Derby. ARTHUR MYERS.

Hardiness of sub-tropical plants.—It may be of interest, and may surprise some of the readers of NATURE NOTES, to mention that the recent severe winter, which even here in Bournemouth froze up most of the water-pipes, and killed such shrubs as laurels, laurustinus, arbutus, berberis, and even gorse, wholesale in many gardens, has proved the completely hardy character of several sub-tropicals, at least in this light soil. Not to mention yuccas, which scarcely even drooped during the severest frost, the bamboos (*Bambusa falcata*, *B. Fortunei* and *B. aurea*), are none the worse, except that a few of their leaves are cut by the East wind. But, stranger still, the "hardy" palms (*Chamærops Fortunei* and *C. excelsa*), some of which have stood out in the garden for several years, while others were planted out last year, have only lost their outer fronds, and are green and vigorous at the top. The only protection they receive during the winter is from a few ashes covered with dead bracken fronds around the roots. Aralias have not suffered in the least. A curious thing happened to a clump of primroses in the garden. It came into bloom during the warm weather in December, appeared in bloom from under the frozen snow when it melted in February, and has been blooming ever since.

H. MORDEN BENNETT.

A Friendly Rat (p. 55).—"G." will, I am sure, be interested to hear that it was quite a common occurrence for a female (brown) rat and her young brood to feed fearlessly with the flocks of fowl almost at the feet of the poultry keeper, near where I resided a few years ago. An old gentleman (*Mus decumanus*) used to warm himself regularly every night at the kitchen fire for years during the winter months, at Castlemorton in this county, regardless of the fact that cats, dogs, and several specimens of the genus *homo* were at the same time similarly occupied. What seems to me strange is that neither the members of the canine nor feline species took any notice of him.

Ferns, Ireland. G. E. J. GREENE.

TO CORRESPONDENTS.

Strathmore.—It is a seedling of the common beech.

E. Swain.—Mr. Kirby says: "The fly sent is St. Mark's fly (*Bibio marci*). Various insects mine the leaves of different plants; the mine enclosed is formed by the larva of a very small moth, belonging to the genus *Nepticula*."

We must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

SELBORNE SOCIETY NOTICES.

The Annual Meeting and Conversazione took place on Wednesday, May 29. Details of the same will appear in the July issue of NATURE NOTES.

New Branch at Farnham.—At the Council Meeting of the 7th ult., the formation of a new Branch at Farnham was formally authorised. Hon. Sec., Miss Marindin, Frensham, Farnham.

A Kindred Society.—In response to an invitation to appoint a delegate to the Council of the National Trust for Places of Historic or Natural Beauty, the Council appointed Dr. Dudley Buxton to represent the Selborne Society. A very successful meeting was held on May 9, at which the Duke of Westminster presided. A report was passed which showed that a vigorous and successful career had been inaugurated in the first year of the Society's existence.

Field Club Saturday Rambles.—

June 1.—To meet at South Croydon, 2.57. (London Bridge, L. B. & S.C.R., 2.25 p.m.) Thence to Croham Hurst and the Addington Hills. Tea at Shirley. Guide Mr. E. A. Martin; ten minutes geological gossip. Return ticket 1s. 3d.

June 8.—To meet at Putney Station (S.W.R.) at 3.4 p.m.; thence to Stag Lane, Warren Farm, and Cæsar's Camp. (Waterloo, 2.45: Clapham Junction, 2.57; Richmond, 2.41.) Guide Mr. Ashdown. Paper by Mr. Field.

June 15.—To meet at Waltham Cross Station at 2.40 p.m.; thence to Waltham Abbey. (Liverpool Street 2.15.) Paper by Mr. Durrant.

June 22.—To meet at Virginia Water Station, 2.30 p.m.; thence to Virginia Water. (Waterloo, 1.30; Clapham Junction, 1.42; Richmond, 1.6 and 2.35, Surbiton, 1.58.) Guide Mr. Jones. Paper by Mr. Edwards.

June 29.—To meet at Pinner Station (Met. R.) at 3.5 p.m.; thence via Ruislip to Northwood. (Moorgate Street, 2.20; Baker Street, 2.37; West Hampstead Station, 2.10). Paper by Miss Temple.

Council and Committee Meetings.—The Council will meet on June 4 and July 2 at 5.30 p.m.; the Magazine and Leaflet Committee on June 19 and July 17 at 5.30 p.m.; the Finance Committee on June 19 and July 17 at 6.30 p.m.

NEWS FROM THE BRANCHES.

Birmingham and Midland.—A Lecture on "Bird Life" illustrated with lantern views was given by Mr. E. S. Baker to a large number of children in Bristol Street Board School on March 27. Mr. J. Hiam, of Astwood Bank, gave a lecture at Alvechurch on "Birds and their Ways" on March 28.

Lower Thames Valley.—Sir Robert Hunter, Mr. F. W. Dimbleby, and Mr. John Allen, Hon. Secretary of the Branch, have been appointed as a deputation from the Selborne Society to wait upon the Government, in conjunction with deputations from the "National Trust," and the Town Council of Richmond, to urge the Government to acquire the Bute House Estate, Petersham, and to add it to Petersham Park.

BRANCH CONTRIBUTIONS.

	£	s.	d.
Bedhampton	1	0	0
Brighton	1	6	2
Croydon	0	4	3
Kensington	1	12	1
Sutton	0	14	6
	£4	17	0

Honorary Secretaries are requested to forward for notice, particulars of meetings held in connection with their respective Branches, and also copies of any leaflets, &c., which they may issue.

Nature Notes:
The Selborne Society's Magazine.

No. 67. JULY, 1895. Vol. VI.

SEAWEED GATHERING.

AT this season many of us turn our fancies lightly to the sea-shore, and if bathing, fishing, throwing stones into the sea or other healthy recreation fill the foreground of our mental picture, there is always room in it for a ramble among the rocks. The pursuit of crabs, small eels, and experiments on the sense of touch in sea anemones may not be Selbornian occupations, though they have a charm for the age of innocence, and often lead to higher things in the evolution of the youthful naturalist. Seaweed hunting, I am afraid, is commonly voted too ladylike an amusement for robust youth, though conducted in a sportsmanlike fashion it is easy enough to drown oneself or one's friends, or break limbs at this pursuit. This view of it, if judiciously explained to the young brother, may be the means of luring him on to the aid of science, and if permitted one or two involuntary baths he will be sure to return with zest. I have seen a distinguished lady writer on seaweeds benefitting science by the retrieving powers of an athletic younger brother, while at the same time, no doubt, it cemented the domestic affections.

The equipment is not expensive. Old clothes are the first necessity, a sponge bag or milk can with a tight lid for specimens, a stick with a chisel edge at one end for detaching them, and, in the absence of the young brother, a landing net screwed into the other end of the stick for recovering them from pools, is all that is needed for collecting. The sponge bag is to take the place of bottles, and the chisel end of the stick to do away with the need of a knife—both undesirable companions in slippery places.

The immediate neighbourhood of river water is generally a bad collecting ground, owing to the alterations in density of the sea water that result from the mixture. Friable rocks like chalk

support relatively few forms, owing tothe bad holding ground for the anchoring holdfasts of seaweeds. A shelving, rocky shore, of which much is exposed at low water, like that of Berwick-upon-Tweed, is always the best collecting ground. At high-water mark and near it there will be found mostly green forms of the same colour as land vegetation; lower down, between tide marks, a profusion of the olive Algæ sheltering red ones beneath them. At low-water mark and beyond it the olive-brown hue predominates, and it also shelters red seaweeds, which go deepest of all. If we take home any of these olive or red sea-weeds and put them for a time in fresh water, they will become green like those at high-water mark; but no amount of fresh water will alter the green colour. If we now put them into spirit (and some of the originally green ones as well) we can dissolve out the green colour. We learn from this that the olive and red seaweeds have two kinds of pigment—one, olive or red soluble in fresh water, and the other, green, soluble in spirit. All plants, except fungi and parasites and the like, have this green colour, and as we know, it is the principal agency in the process of nutrition. In the presence of sunlight it enables the plant to convert the inorganic substances on which it feeds into plant substance. What then is this added olive or red colour that we find in seaweeds between tide marks and below? How is it useful to these sea-plants?

We know that the great depths of the sea are quite dark, no ray of light penetrates into this pitch black world inhabited by luminous animals, often of grotesque form, fitted to withstand the tremendous pressure of the water. There are no seaweeds down in this darkness; they need the light of the sun. If we could descend in one of M. Jules Verne's appliances we should find this total darkness begin somewhere about 700 fathoms; probably before that, but in the gloom between 50 fathoms and 700 there would be no seaweeds—or very, very few immediately below the 50 fathom line. We might come upon some detached specimens washed down in a submerged current. How is it, then, that there are no plants even in this twilight? Is it pressure? for plants can certainly grow with very little light. We might hazard a considerable number of such reasons, but the true one is this. The sea water absorbs the light, producing darkness as we have seen, but it also intercepts some rays very quickly indeed, permitting others to pass farther into the depths, and thus affects the quality of the light. Those first intercepted are precisely the rays most efficient in appealing to the green colouring matter of vegetation, and in their absence or diminished supply, plants either cease to exist, or do so with a special provision for the purpose. We may fairly conclude, then, that these added colouring matters, olive and red, are adaptations to this diminished supply between tide marks and immediately below low-water mark, and that even with such help sea-weeds cannot penetrate very far. Whether these added colours heighten the susceptibility of the green colour to a diminished

supply of the useful rays, or shield it, as is much more likely, against the excess of the blue rays, has not been determined by experiment.

If seaweeds cannot grow on the floor of the deep sea, they yet inhabit "blue water." I am not specially alluding to forms like the gulf-weed of the Sargasso Sea, but to the enormous abundance of microscopic Algæ floating in the surface layers of all seas. They occur in inconceivable abundance everywhere, from the polar seas to the equator, and form the food of minute animals, which in turn support the fishes. They are fewer in the number of species than the shore Algæ, but immeasurably greater in numbers of individuals and in the mass. The mere fringe of seaweeds round our coasts could never support the animal life of the sea by itself, and this floating microscopic vegetation is the pasture ground of the animals of the ocean. It will give you some idea of its extent if we make the following comparison. The Sargasso Sea is, compared with other tracts of the ocean, poor in this minute vegetation, but if we were to collect the whole of it in fine silk tow-nets, and make a great heap of it, and make another heap of all the big gulf-weeds in the same sea, the mass of the individually microscopic forms would greatly exceed the other. They are very little known as yet, these microscopic pelagic Algæ. In the cold seas especially they are principally diatoms with siliceous membranes, and in the temperate and tropical seas great numbers of others called coccospheres and rhabdospheres, occur with incrustations of carbonate of lime. When they die, these hard mineral parts sink slowly down on the bottom of the deep sea, and form a deposit of much geological interest.

But we have been long enough in the deep sea, and must begin to think of what we are to do with the specimens you have been collecting, while absorbing all this dry information. No need to give directions for drying the specimens. The floating of them out on mount papers, the placing a layer of muslin over them to keep them from sticking to the drying paper, are really the only points of difference from drying land plants. Then the process of pickling them in spirit after treatment with picric acid is one that appeals to the special student, and is already well enough understood by him. To keep them alive in aquaria for observation is perhaps more to the taste of the Selbornian. This is an extremely difficult matter with all but a few forms. Those from deep water are beyond all ordinary appliances and precautions, being very easily injured by light and the least rise of temperature. In all cases keep very few specimens, and these small ones, if you mean to succeed. Never expose them to direct sunlight, but let the room be well shaded and the cooler the better. A cellar with very little light is the best place. You will certainly kill them by aerating the water more than a very little, as the air introduced carries off too much carbonic acid. A fresh supply of salt water, or of fresh water added to make up

for loss by evaporation, should be introduced drop by drop, to avoid the injury easily inflicted by alteration in density. We must remember that seaweeds live mostly in a constant low temperature, with little light and in a medium that hardly changes in density. The deep water forms can only be successfully moved on a cloudy day and with the help of ice. A big earthenware jar makes a good aquarium, and it is best to have a few pebbles at the bottom, and always to bring the specimens with the stone, or a piece of it, to which they are attached. Detached specimens will very soon die.

If you wish to make periodical observations on particular forms, much the easiest way is to suspend them in a basket from a moored buoy in the sea, and haul them up from time to time. In this work all the shining virtues of the young brother will be called forth. He will think no more of it than of hauling up a lobster pot or "getting" a boat anchor. It has the added pleasure of being rather more sloppy. Dredging and "tow-netting" are the work of special students, and directions for their proper undertaking can hardly be written down—not that the language is unparliamentary, though when spoken it tends in that direction only too frequently, but they can be given only on the spot. Two things may be said, however: use an ordinary oyster dredge, and see that your tow-nets are, one on the surface and the others at different depths, and that they stay there. Unless you are used to the ways of the sea and the management of a boat with the dredge down, do not attempt it without the aid of a skilled boatman. You may lose your life or even a valuable dredge. Even if you try all the other things and do not succeed, you will be the better for trying, both in mind and in body.

GEORGE MURRAY.

STUDIES OF BLACKBIRDS.

WITH no conceit let me say it, few persons are better fitted to write of blackbirds, their tempers, speech, songs, and ways, than my unscientific self. They have gradually surrounded me, forcing themselves on my attention, whether with song so exquisite that angels in passing might lend an ear, or with domestic quarrels so fierce and loud that we are occasionally obliged to go to disperse the combatants, and so restore order for a time; or with wild sounds of alarm that announce the dreaded approach of sparrow-hawk, jackdaw, or cat, and that disturb our peace of mind at many an otherwise peaceful meal-time, and send us flying to their abodes, regardless of digestion and conventionalities—all this and much more—an environment of blackbirds seems to have encompassed me about. When first we came here nearly four years ago,

there was only one blackbird in front of the house. The destructive blizzard of 1891, and the lack of houses in the neighbourhood were, we conclude, responsible for this lack of blackbirds. Only two had outlived the season's distress, and one only had possession of the little lawn and bushes in front of the house; this territory including also a valuable bit of damp ground where a spring rises, and a small vegetable garden. The other was relegated to the back, and when he ventured to set claw on the territory of the first, was flown at, pecked, beaten with wings, scolded by Mrs. Blackbird, and driven off the scenes.

Having satisfied himself that (new-comers and wingless though we were) we were respectable, inasmuch as we were innocent of guns, traps, cats, or any evil intentions towards the established bird-residents, our friend came boldly to our dining room window one cold day, three and a-half years ago (his brown mate in sight), and said plainly in bird speech, "Give me some food, and I'll sing for you in the spring!" We acceded to his request, and right nobly has he fulfilled his share of the contract. Every spring has his voice gained an added sweetness and richness. When first we came it was a simple refrain that he sang. Once, when serious illness threatened one of us, he sang from his tree, "You'll soon be well again!" Over and over again this cheery morning greeting was sounded, what better tonic could be desired? With advancing years his *repertoire* has increased, and the peculiarity of this chief singer amongst blackbirds is, that when his song is at the sweetest he will suddenly break off in a rippling laugh of irrepressible bird-joy, surely like an angel's mirth! I have never heard this to the same extent in any other blackbird, and, alas! this spring only seldom from this one.

It was in the early days of last December, when one morning I saw my favourite blackbird sitting under a bush, evidently in hiding, looking ruffled and dusty, and taking no notice of other birds coming about. He retreated further at the sight of me, but I went after him, and threw a piece of soaked bread near him; I noticed that he flopped to it with difficulty, but, as is the manner of bird or beast when sick or wounded, he shrank from notice. Every day, however, he was on the look-out for food, and became tamer and tamer, until one day he came limping to me, and I found to my grief that he had entirely lost one claw, the work of some cruel trap. The loss of a claw to a blackbird is more serious than to insectivorous birds, such as redstarts or wagtails, or to birds of the finch and sparrow tribe. Anyone who has watched a blackbird getting a worm out of the grass will understand what is meant, for he jumps on both claws to obtain additional strength. So from December till June, our blackbird has been a constant visitor. When snow lay thick on the ground, there he sat, a patient "local black." When the sun shone hot in May he revived in health and

spirits, and we found to our delight that he had a nest, and had got out at least one young one. Then it was that his song broke out, strong and full from his blackbird heart, with the old cadenza of joyous mirth, but not so often as we could have wished. Now again, in the glare of June sunshine, we are often aware of the silent, coal-black bird sitting on the lawn, awaiting a piece of soft cake or bread.

When he was crippled in the winter, the blackbird from the back eagerly watched his chance of gaining a footing, he would even imitate the pose of our invalid to secure a portion of his good food; we named him the Usurper, and feared he would drive the poor invalid off the scenes. Fate, however, was too strong, and for once befriended the weaker side; the usurper fell a prey to the cruel ravages of a sparrow-hawk. It was on an evening early in May, in the midst of spring flowers and bird-joy; suddenly there was a screaming and a panic, and two birds swept past from a bush, apparently falling down together into the high-banked trout stream in the meadow. I ran to see what was happening, not realizing at the moment, so instantaneous was the flight, that it was a hawk. On reaching the stream up rose the sparrow-hawk with a fine blackbird fixed in his talons, so near to me that had I had a stick I could have hit him. It was a sorry sight, and we feared for our invalid, but next morning he presented himself for breakfast. But never again has the usurper been seen, and we realise the awful fate that befell our second sweet singer.

Now that our invalid no longer disputes entire possession of the lawn, a younger bird, a son we believe of his, has built in an ivied wall near the house, and, after the manner of birds, pays scant respect to his parent. His song is not yet so fine, nor his plumage so glossy and black; what of that? he is the younger and stronger. He has looked after his young ones with commendable zeal, running backwards and forwards in the hot sun, with soft crumbs when worms were a scarce luxury, and in due course bringing his young ones to us to see, with the tameness of the chaffinch. As one after the other learned the art of swallowing, he would leave them to us, and running back with an agility, envied, I am sure, by our invalid, would supply the next youngest from a beak loaded with provision. He has a long name, but descriptive—"The Energetic Father of a Family" is his title. The young ones still come to us for supplementary food; should an ill-mannered sparrow try to seize the food from their bills, they let me send off the sparrow and remain near me to eat their portion in security. It is an opportunity for noting the colouring of the young blackbirds; the head, breast, and part of the back and wings, being of a golden brown, almost pheasant-like colour, the first black feathers appearing in the tail and wings, and as yet no orange bill, or rims round the eyes. Feathers evidently blacken with years, or rather with each successive moult.

The blackbirds are in much fear of jackdaws, our invalid crouches as though at the approach of a sparrow-hawk, when one flies to take his food from him. Mr. F. S. Ellis, who is better known as an authority on rare books and MSS. than as a lover of birds, told us that he had discovered a jackdaw in the act of dragging the young out of a blackbird's nest, with a view doubtless of tearing them limb from limb, and thus providing food suitable for his young.

Why cannot some of these ferocious birds turn their attention to sparrows? of them we have far more than enough. The same informant told me of a strange scene lately enacted at a neighbour's house. Such was the uproar amongst the jackdaws that they went to see what was happening in the bird-world, and found that a jackdaw with only one claw had been condemned to death by his comrades. The decree had gone forth and they fell upon him, pecking and beating him to the death. May such not be the fate of our poor invalid!

Chagford. HELEN J. ORMEROD.

SHELLS AND THEIR INHABITANTS.*

TRUE lovers of nature, amongst whom of course we do not include the mere collector of natural history objects, but those real Selbornians who, if they collect at all, do so as an aid to their studies and therefore intelligently, will welcome this forerunner of "The Cambridge Natural History."

The series is intended, we are informed, "in the first instance for those who have not had any special scientific training, and who are not necessarily acquainted with scientific language." To begin with, therefore, we are told in the opening pages something about mollusca generally and the great groups into which they are divided. The origin of these principal groups is, as Mr. Cooke indicates, a problem of very great subtlety, but he finds less difficulty in tracing, as he next proceeds to do, the origin of the land and freshwater forms from certain marine ones, taking for granted of course the axiom of most naturalists that the good old sea has been the cradle of all life. The conversion from a marine to a terrestrial mode of life was of course a gradual one, brought about by some forms accustoming themselves to live first in brackish and then in fresh water or to exist for longer and longer periods out of their native element altogether.

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* *Molluscs*, by the Rev. A. H. Cooke, M.A. *Brachiopods* (Recent), by A. E. Shipley. *Brachiopods* (Fossil), by F. R. C. Reed, M.A., pp. xi., 535; 3 maps, 334 text illustrations. *The Cambridge Natural History*, vol. iii. (London: Macmillan & Co.) 8vo., 1895. Price 17s.

From this the transition to the habits and general economy of the land and freshwater mollusca is an easy one. Their endurance of cold is remarkable, the freshwater forms will survive being frozen into solid ice and can become accustomed to live in the hot water of geyser basins, where the temperature attains something like 122° F.

Apropos of food we learn that many of our common slugs will not touch green food at all, but nearly all of them will eat and enjoy animal food. The two kinds that do most damage in our gardens have the meanness to bury in the daytime and thus throw the blame of the mischief they have wrought on their larger and more innocent brethren, who with clear consciences do not resort to such subterfuge and suffer in consequence. Conspicuous amongst those invasions in the garden are the large grey slug, spotted and lined with black, and the yellow slug; the former is exclusively a fungus eater, whilst the latter is a lover of the larder and given to a milk diet. The worm-eating slug is of course one of our best friends. Whilst all are voracious feeders it is remarkable what long fasts some snails can endure. Not only do they remain dormant throughout the winter in our gardens huddled together in some cosy retreat under ivy, or in an old flower-pot, but instances are not wanting in which species from arid localities have survived the close confinement of a pill box for years. Nor must the classic instance be forgotten of the desert snail, who remained for four years gummed down on a tablet in the British Museum. This "Rip van Periwinkle," as a friend of the present writer humorously styled it, when released from durance vile, proceeded to make a hearty meal and lived for some months afterwards, adding even to its shell.

A curious faculty our garden pests possess is that of finding their way home to some favourite lurking place, or of seeking food; and Mr. Cooke tells a funny story of one snail that had found food in a neighbouring garden, returning to fetch a weaker mate and piloting it to the land of plenty "over the garden wall." The strength of snails is less familiar to those who have not experimented with them, nor incautiously introduced their finger within the shell of living oyster; but a Mr. Sanford appears to have induced an unfortunate "john-jeeks" to drag across a smooth table "twelve reels of cotton, a pair of scissors, a screw-driver, a key, and a knife, weighing in all no less than 17 oz., or more than fifty times its own weight."

Space will not suffice to tell of all the interesting things to be met with in this portion of the work, nor to enlarge, as Mr. Cooke is able to do, on the enemies of the snails and the means of defence the latter employ against them. We must, however, call attention to one prominent instance in which immunity from attack is secured by a quaint form of concealment; namely, in the genus *Xenophora*, the animals of which build into their shells pieces of stone, coral, shell, or even whole shells, whatever in fact happens to be most plentiful on the beach they inhabit till

they can with difficulty, if at all, be recognised from their surroundings. We are enabled, by the courtesy of the publishers, to give figures of these. The analogy of the caddis-worm and its case will of course occur to all.

The section on variation is very interesting, and the full page illustration of the different forms of the common dog-whelk (*Purpura lapillus*) ought to teach a useful lesson to certain benighted shell collectors, who spend their lives inventing a new name for every shell that shows some slight difference in form from its brothers. "Shells as ornaments" we must not dwell on, nor on "Mollusca as food for man," although "Oysters under the Romans" sounds a tempting theme. "Snails as medicine" and "Prices paid for shells" conclude this, the most attractive part of the book to the general reader. The student will find the chapters that follow, on the anatomy of the mollusca, very helpful to him, though both in this and the systematic

Zenophora (*Phorus*) *conchyliophora*, Born., concealed by the stones which it glues to the upper surface of its shell. (From a British Museum specimen.)

Zenophora (*Phorus*) *pallidula*, Reeve. A mollusc which escapes detection by covering itself with dead shells of other species. (From a *Challenger* specimen in the British Museum, × ½.)

portion of the work, with which the labours of Mr. Cooke are brought to an end, he will do well to bear in mind the golden rule that there is no royal road to any branch of learning, and no single book can ever be entirely relied upon.

Of the chapters that come between these two last-named subjects, and deal with the distribution of the mollusca, nothing need here be said, for they are of necessity tough reading even to the expert; and though Mr. Cooke has done as well as man could to make them readable, the abundance of scientific names on every page renders them dry pabulum indeed, despite the excellent figures that occur at intervals, veritable oases in a desert.

Indeed, with but few exceptions, the figures throughout the

book are most excellent and the greater proportion of them new; a most valuable feature in this age of book-making—from old materials. Three outline maps are also given as aids in the study of distribution.

The brachiopods, or lamp-shells, do not lend themselves to such popular treatment as the mollusca, for being sedentary animals they have not developed "habits" of interest. Mr. Shipley for the recent, and Mr. Reed for the fossil forms have, however, done their best with their anatomy and the structure of their shells, as well as their systematic arrangement, so that these portions of the work must be left to the student to judge of.

The work as a whole is thoroughly well got up and we cordially recommend it to our readers.

B. B. Woodward.

WILD FLOWERS AT HOME AND ABROAD.*

THE general exodus which is so marked a feature of city life will be at its height before July draws to a close, and London will be reduced to the condition when, by an extraordinary figure of speech, it is said that there is "no one in town." It is a harvest-time for youthful collectors, who, too young to wander abroad by themselves, accompany their elders to pleasant country or seaside retreats, and find themselves in "fresh fields and pastures new," with other surroundings than those to which they are accustomed. It is only town children who derive from such a change the full benefit which it is capable of conveying; and in these latter days, so much have facilities for locomotion increased, that even to them the holiday excursion has not the delight of novelty which attached to it three or four generations back. Yet it must always remain the chief yearly event, whether the young travellers are limited by the seas which surround our shores, or journey westward to the delightful albeit "distressful" country, or go further afield to French watering place, German forest, or Swiss mountain. And it may be laid down as a certainty, that none among the holiday makers, whatever their age may be, enjoy themselves more thoroughly than those who are interested, even though it be but slightly, in some branch of Natural History.

On these occasions, wild flowers assume a position of importance from which they are often ousted at home by the superior attractions of birds. That these latter are the popular favourites

* *Wayside and Woodland Blossoms*, by Edward Step. London: Warne & Co., pp. 173, 156 coloured figures. Price 7s. 6d. *Flore Coloriée de Poche*, par H. Correvon. Paris: Klincksieck, pp. 161, 144 coloured figures. Price 5s. 3d., post free.

no reader of NATURE NOTES can doubt; their admirers claim as many pages as are occupied by all the other branches of natural history combined, and the literature devoted to recording their ways seems inexhaustible. But flowers hold their own when we are travelling from place to place. Even if we remain in England, the varying flora of different localities affords more than sufficient interest; while the fortunate visitor to the Swiss mountains is almost overwhelmed with the abundance and variety of the exquisite wild flowers which meet him at every turn.

The taste for natural history being fortunately, in spite of occasional statements to the contrary, very widespread among us, it is natural that it should have produced a crop of literature bearing on the subject, and that among this crop, as among others, there should be a considerable proportion of weeds. Leaving out of consideration the technical floras, such as those of Babington, Bentham, and Hooker, and having nothing but praise to bestow upon such books as Mrs. Kitchener's *A Year's Botany*, it must be confessed that popular books on wild flowers are often at best feeble and unhelpful, and at worst positively misleading. Mr. Step has taken a step in advance—the pun is unintentional—with his little volume on *Wayside and Woodland Blossoms*, the worst part of which is its title, which, we confess, somewhat prejudiced us against the book, especially when our eye fell on an advertisement among the same publishers' "Useful Manuals for Lovers of Nature," of the very worst book on "English Wild Flowers" which has ever been written.

Mr. Step has not produced a model popular flora, but he has given us in small compass a great deal of useful information, much of which we look for in vain in any other work of the kind. By the rigid exclusion of scraps of poetry, fragments of quotations (usually at third-hand) from Gerard, and the like, Mr. Step has been able, between the covers of this very convenient-sized volume, to include references to the many points of interest connected with our common plants to which Mr. Darwin was the first to call attention. Thus, in the first twelve pages, we find under the Cowslip an account of dimorphic flowers and their significance, under the Violet and Broom details of their fertilization, under the Woodsorrel a notice of the "cleistogamous" flowers (already duly noted in the Violet): and this method of giving recent information in a simple, pleasant, and accurate manner is kept up throughout the book. The result is that the intelligent learner acquires almost insensibly an amount of knowledge regarding the life-history of our common plants, for which he will look in vain in many more pretentious publications. The treatment of fertilization is especially full; Mr. Step has condensed the best observations into small compass, and his little volume is, as we have already said, greatly in advance of every previous undertaking. It will add very slightly to the bulk of the most restricted arrangement of luggage, and forms an admirable pocket companion for the lover of wild flowers.

A second edition will, we hope, soon be called for, and one or two suggestions may be made regarding it. The very brief space—little more than four pages—devoted to lichens, mosses and fungi, might be more usefully occupied; one does not expect to find these among "Wayside *Blossoms*," and the ferns and horsetails might disappear, on the same ground. The arrangement of the book is governed by "technical difficulties connected with colour-printing and binding," which is unfortunate; it is true that the index and a list grouped according to the natural orders partly remedy the inconveniences resulting from this state of things, but Mr. Step's attempt to arrange the plants "more in seasons" is not happy, inasmuch as, after we have disposed of the cryptogams, we come upon a number of descriptions of trees—by no means all native—which appear to have been introduced solely for the purpose of using up a number of uncoloured figures which the publisher happened to have in stock. The paging of this quasi-appendix is erratic.

Mr. Step's notes on plant-names are often suggestive, but sometimes misleading, and he will do well to consult the English Dialect Society's Dictionary of these before printing his second edition. He will then, we hope, abandon the modern and unauthorized spelling of "Hair-bell;" for, although it is true that "Hare-bell" is unexplained, it is the old spelling. What Mr. Step means by saying this "has no chance of retention among botanists," we cannot conjecture; for "botanists," using the universal language, call the plant *Campanula rotundifolia*. But to suppose that the popular name refers to "the slender hair-like stems" is to invent a reason and then alter the name to suit it. Mr. Step thinks "John-go-to bed-at-noon" is the longest English plant-name; but he will find that the pansy is called "Meet-her-i'-th'-entry-kiss-her-i'-th'-buttery" in North-west Lincolnshire.

As to the plates, most of them are fairly satisfactory; one or two, however, are bad, *e.g.*, the Yellow Iris. But the printing in colours has produced some strange results; who (except perhaps Mr. Grant Allen) would have thought that Ground Ivy and Ivy-leaved Toadflax were of the same hue?

These criticisms are not intended to detract from what has already been said as to the usefulness of this little book. In it the reader will find much to learn and very little to unlearn, and we know no other that can be so unreservedly recommended to the tyro in British botany.

M. Correvon has aimed at producing for the tourist in the mountains of Switzerland, Dauphiné, and the Pyrenees, a similar volume to that just noticed; and indeed in size, shape, and general get-up, it is a suitable companion to Mr. Step's book. The figures, however, are by no means so good, either in design or in colour: some of them, indeed, are very bad—*e.g.*, *Azalea procumbens*—and by no means likely to help the doubting collector. The plan of the book is different: the "techni-

calities connected with colour-printing" have not prevented M. Correvon from following the usual sequence of the natural orders, and the letterpress is simply descriptive of the more conspicuous and frequent plants of the regions named.

Some time since we recommended an admirable book — Gremli's *Flora of Switzerland*—to botanists who were taking their summer holiday in the Alps. M. Correvon's little volume will supply to the traveller who takes a casual interest in wild flowers almost as much useful information as the more scientific manual gives to the botanist, and will even form a suitable stepping-stone to its employment.

We must not, however, conclude this paper without making a special appeal to Selbornian and other flower-lovers, both at home and abroad, to be moderate in the toll they take of the plants they meet with in their rambles. We dwelt upon this at some length in our issue for July, 1892, and as the caution is not needed less now than it was then, we will repeat what was then said, for the benefit of recent subscribers :—

"Perhaps the wild flowers, both at home and abroad, are in most need of protection, as they are the most defenceless against the attacks of depredators. The botanist is not always discreet, especially if his zeal for collecting is greater than his love for science; but after all he is the least dangerous of the enemies the flowers have to encounter. There is the fern-grubber, for instance, both amateur and professional; there are the young ladies—we have seen them in Switzerland—who trudge down from the mountains with baskets and handkerchiefs crammed with flowers, or rather with *plants*, which is far worse. Little harm, indeed, is done by plucking flowers, but towards the top of the mountains, where the Gentians, Androsaces, and the like, gain but slender roothold among the loose stones, and are more easily pulled up than gathered, serious mischief may be, and is, done. Remember, ladies, that these delicate and fragile little flowers are not very likely to grow, even if you take them back to England with you, which you very seldom do."

THE EDITOR.

The Nightingale.—A pair of nightingales arrived here about the beginning of May, this being the first year they have ever made their appearance in these parts. It must have been the unusual warm spring that tempted them to come so far north. They built their nest in the garden in a low hedge of thorns; the nest was the smallest possible little structure made of twigs and grass, &c., and five eggs were laid. The cock bird sung beautifully all the time the hen was sitting, but as soon as the eggs were hatched he only sung an occasional note now and then. The parents were most energetic in feeding their young, and took it in turns to sit on the nest; the moment one bird returned with a tempting morsel the other immediately left the nest and went off in search of more food, so it was one perpetual going backwards and forwards.

Derbyshire. A. K. M.

A TWO-MILE WALK.

THE following mental notes on ornithology were made on April 18, during a two-mile walk through a tract of country where one comes across some birds not to be seen everywhere and every day. I had spent the afternoon with a congenial spirit, and my walk home was through a highly preserved estate, composed of copses here and there (locally called plantains) and of open country, partly covered with heather and gorse, while the low lands were marshy, with a stream some two hundred yards off. Game of the usual kind was in abundance, and here let me say that since I have lived in the eastern counties I have proved the error of the somewhat prevalent idea that "Frenchmen," or "red legs," are inimical to the well-being of the common partridge. Judging by the numbers of both that are in these parts, one would say that they get on well enough together. For one fight between French and English, I believe there are dozens where Britishers are the sole combatants.

In front of my friend's door was a redstart, who had only just arrived—a beauty he looked, and in such splendid plumage. A hundred yards further on I heard a bell-like note to which I was unaccustomed—a great tit, I'll be bound, who had taken up some fresh fad, only to drop it in a day or two, when something else has come into his head. And so it was, for on the top of one of the few tall poplars left by the late gale, were two great tits busily prying into the opening buds. On the edge of the plantation I heard a nightingale for the first time this spring. There are only a few here yet, and in a day or two they are sure to be singing in my garden. The open heath is a favourite spot for wheatears. It was here I saw one on March 15, 1893, but the spring of that year was so severe that great numbers perished. Indeed, from the few that I saw the other day, I should say they had not yet recovered from its effects; for you must remember that the wheatear is one of our earliest migrants, and they ought all to be here by the middle of April, or nearly so.

To my right was a large level tract, which seems to produce nothing but a crop of flints. It is, however, a favourite haunt of the Norfolk plover. Here I heard their weird cry, and saw them on the wing and on the ground. I must get the owner of the estate to forbid his keepers to shoot them. If one speaks directly to a keeper about not killing a creature, he looks on you as a born idiot, as I have found before to-day; so I shall go to head quarters. Over the marshy ground the snipe were "drumming" by the half-dozen at a time. Few persons have had better opportunities of watching this performance than I have had for the last ten years, and often have I availed myself of them. It is, I suppose, impossible for me to add anything to

the vexed question as to how this sound is produced, whether by the wings or tail feathers; but I must own to not being yet converted to the theory that it proceeds from the feathers of the tail—though the mighty Darwin is in its favour. The sound is produced whilst the bird is making a downward swoop, and during this time the tail is expanded, and the wings are moved in an extraordinarily rapid manner. The moment the bird turns upward in its flight, the expansion of the tail and the peculiarly rapid beating of the wings cease, and the sound too, stops. If the sound were produced by a feather in the tail, which is simply extended to the air through which it is rapidly passing, would not the result be a continuous sound, and not intermittent—reminding one of the bleating of a lamb or kid?

In two different covers I could hear the greater spotted woodpecker tapping his love note on some hollow tree, and one of his tiny first cousins, the "lesser spotted," was kind enough to let me get within twenty yards of him before he took to flight. While in a clump of beeches their green relative laughed as if he was enjoying himself. One does not see these three birds every day. The peewits were much in evidence, but their numbers seem thinned by the severe winter. I could see some dozen wild ducks on a part of the stream which widens out into still water. A farm at the edge of the common produced a chorus of sparrows, a robin or two, some starlings; one of which, by-the-bye, was imitating a peewit and a solitary kitty-wren.

Above a sand-pit were a number of sand martins, no doubt discussing the question as to whether they dared go back to the hole they had made last year or not; for I have noticed that the edge of a sand martin's sanctuary is not unfrequently guarded by a legion of fleas, which are not particular as to whether they make for man, beast, or bird. I might add to this list blackbirds, thrushes, greenfinches, yellowhammers, common buntings, larks and tits, two kinds of wagtails, swallows, house martins, chiffchaffs, willow wrens; but strange to say, neither whinchat nor furzechat. Just then my carriage caught me up, but not before I heard a "cushey doo" cooing in a cover close by. Perhaps the "billing" part of the business was going on at the same time, for they do say that sort of thing is much in vogue amongst most of God's creatures this jolly time of year.

I do not think one will often get a better lot of birds in a two-mile walk than this. A week or so later more spring birds would be on view. I almost forgot to say I heard the cuckoo more than once; but I had to get close to the house before I could distinguish the wryneck. This year all the birds seem rather later than usual.

EDMUND THOS. DAUBENY.

SELBORNIANA.

To Selbornians.—We think that NATURE NOTES would become more useful than it is if our readers would take the trouble to keep us posted with information bearing upon subjects of special interest to Selbornians. For example, the management of Epping Forest and the endangering of the Highgate Woods are matters which interest us all, yet no communication regarding either has reached us. NATURE NOTES ought to be a storehouse of information upon subjects such as these; but the Editor cannot himself supply it, and is thus dependent upon his correspondents.

New Worcestershire Records.—Mr. Charles Waterfall has kindly supplied me with specimens of *Fumaria parviflora* and *Euphorbia Esula*, var. *Pseudo-cyparissias*, recently gathered by him at Ripple. The latter he first met with at this station in 1893. Both are new county records. I may add that one plant of *Euphorbia Esula* (type) was found by the late Captain A. Stewart and myself, growing among corn at Bransford, Worcestershire, in 1892, but it was evidently an introduction with seed.

RICHARD F. TOWNDROW.

Galium sylvestre, Poll., in Worcestershire.—This plant was met with, in some plenty, in a pasture at Malvern Wells, during an excursion of the Malvern Field Club, on June 6. In *The Stranger's Guide to Worcester*, by Ambrose Florence (Edwin Lees), 1828, it is included, under the name of *Galium pusillum*, in "A Catalogue of Plants growing wild in the vicinity of Worcester," with the station "East Side of Red Hill." In *Topographical Botany*, 37 (Worcester) is bracketed with other counties as "insufficiently vouched," and Mr. Lees appears also to have doubted the authenticity of the record, as he omits any mention of the species in his *Botany of Worcestershire*, published in 1867.

RICHARD F. TOWNDROW.

Slaughtered for "Trimmings"?—Not a single house-martin has been seen this year round my house. A pair used to build under the thatch of an out-house in my grounds, and it was a constant pleasure to watch them dart in and out when tending their brood. Others must have had nests not far off. Where are they now? I fear that either the severe weather, which was so universal last February, has destroyed them, or they have been slaughtered to make "trimmings." Of the two suppositions, I incline to the latter. One result probably will be that in the early autumn we shall be pestered with flies.

Folkestone. A. L. HUSSEY.

Annual Meeting of the Selborne Society.—That the Annual Meeting on May 29 was well attended we are in a position to testify, for, arriving not very long after the appointed hour, we were unable to obtain admission to the large hall, and were compelled to solace ourselves upstairs with an inspection of a very interesting collection of various editions of White's *Selborne*, of which Mr. E. A. Martin had prepared a list, preliminary to the complete bibliography which is in course of compilation. But as no account of the meeting reached us until June 19, we are compelled to make our record brief. The chair was taken by the Earl of Stamford, and speeches were delivered by Dr. Dudley Buxton, Mr. J. L. Otter, Mrs. Brightwen, Mr. Charles Burt, and Prof. Boulger. The Annual Report, which is issued in full with the present number, was presented and adopted. We hope to print Mrs. Brightwen's address, which was listened to with great attention, in our August issue.

NATURAL HISTORY NOTES AND QUERIES.

Dancing Birds.—I enclose a short notice from the *Echo* of March 6, which may interest those Selbornians who remarked my account of dancing turkeys in NATURE NOTES for 1893, page 243. Even Mr. *Punch* took notice of my "dancing turkeys" with marks of decided incredulity. Some years before I became a "Selbornian," I read several accounts of this habit of other birds besides turkeys in some magazine, but have unfortunately forgotten which. It would be interesting to discover what birds; I am inclined to think they are chiefly of the gallinaceous tribe. "A good story is that told by Dr. Japp in *Cassell's Family Magazine* of the dancing parties or balls which some birds hold. Did you ever hear of them? The birds which specially indulge in these dissipations are the bower-bird, and the American grouse and prairie fowl; and people who have seen the performance say it is one of the most amusing sights in the world. The American grouse first prepares its ball-room by beating down the grass floor with its wings, the hall being left surrounded by rustling grass and golden asters. Morning and evening a party assembles here, with pirouettes and curtseys. By twos and fours they advance, bowing their heads and dropping their wings; then they recede and then advance again, and turn on their toes, swelling their feathers and clucking gently. Surely they must have a dancing master! Mr. Lord, *The Naturalist in British Columbia*, gives a description of a dance of prairie fowls he saw. There were eighteen or twenty birds present, and they danced with their little tails elevated and their wings dropped close to the ground and their heads erect. They circled round and round each other in slow waltzing time; then they did a sort of 'cure' performance, jumping about two feet into the air; and then they strutted about and 'struck an attitude,' like an acrobat after a successful tumble. All the time they kept up a "cluck-cluck," having, I suppose, to supply their own music."

M. S. YOUNG.

Thoughtfulness in Birds and Animals.—In reading the article, "Some Commonplace Fowls" (p. 32), I was reminded of a little incident which took place in a field, which one of my windows overlooks, where a number of fowls are kept. I observed that a hen had injured one of her legs in some way, and was struggling on the ground, unable, apparently, to walk or even stand. While in this condition, several of the other hens rushed upon her and began to beat her violently with their wings, and to peck her about the head. A cock, however, not far off, was not slow in seeing how matters stood, and running at full speed up to the offending hens, immediately drove them off and stood over the injured bird in order to protect it. It is said that a caged bird, not possessing the full power of its wings, will, if allowed its freedom, be persecuted by other birds, but I have never before, myself, observed such conduct in the "domestic" fowl. The action of the hens was remarkable, but the "Selbornian" spirit of the cock was, in contrast, not less noteworthy, and one from which we, "beings of thought and reason," may well, perhaps, find a lesson, even though some may say that the propelling force, as regards the cock's action, was "simply instinct," and that birds and animals are incapable of thinking. But the fact that they are incapable of thinking and reasoning as human beings is surely no proof that they do not possess the power of thought and reason in a certain sense, and to a certain extent. In face of the many incidents recorded in NATURE NOTES and elsewhere, it seems absurd to endeavour to maintain that they do not. It is difficult to believe, for instance, that a bird is prompted merely by instinct when it carries a snail or shell-fish to a certain height and lets it fall upon a rock in order to break the shell, and if the desired result is not obtained, rises with it to a greater height in order to increase the force of the fall, and lets it drop a second time upon the rock. Nor can it be said to be "in the nature" of a milkman's donkey to call with the milk at the house of every customer in his master's absence, and when the door was not opened, to ring the bell by pulling the handle with his teeth. Yet such an instance is recorded, though no attempt had ever been made to teach the animal the use of the bell handle. Its action must have been the result of its observation. It must have

had some kind of thought that the pulling of the bell handle meant the opening of the door; and if it thought, then to a certain extent it reasoned, for thought, in a sense, is reason. C. E. C.

An Eloquent Parrot.—One of my grandsons has lately brought me a fine grey African parrot, to keep for him when he is at school. The bird is one of the most amusing I ever met with. His conversational powers are remarkable, and it is, I confess, to me astonishing how well his remarks fit in with the things said in his hearing. The morning after he arrived my black cat came in, and Polly at once began to mew; puss looked around for a cat, and at last saw the bird, looked scared at a fresh "mew," and flew under my chair; a third "mew" sent her off through the doorway, when Polly ejaculated very clearly, "Poor old cat" twice, and began to whistle. She holds conversations with herself, and laughs at the right time if any one is relating a funny tale, but that I think is because she notices people smile. She mocks the hens, barks at the fox terrier, calls the servants by their names, and when the man brings the milk screams out "Milk O!" This is singular, for the man never carries cans or calls out milk as they do in towns, so how is it that Polly connects in her mind, as she evidently does, the jug he brings to the house morning and evening, with the milk vendors and their cry in a town? Polly prefers gentlemen to ladies, and will never allow me to "scratch her poll." Her great delight is to dance for the children's amusement on the top of her cage. They sing to her and she whistles. I have never seen an elephant dance, but it strikes me that Polly's ungraceful movements might match any Jumbo's. If she is laughed at she stops, and refuses to dance again that day.

Liss. HELEN WATNEY.

The Cuckoo Again.—A short time ago in a London paper a correspondent stated that he saw in a country garden a young cuckoo being fed by a robin and a wren. "The robin," said the writer, "fed it reaching over from a twig in front, while the wren hopped on its shoulder and fed it sideways. It seemed as if it would snap up parents and all. The little birds were evidently in a state of terror, and at the same time of proud and loving agitation. As they fluttered off twittering to find more food on the ground, their prodigy pursued them overhead from tree to tree." It would be interesting to know if any Selbornians have ever known of a case in which a young brood has been reared by robin and wren.

C. E. C.

Number of Eggs laid by Cuckoo.—Mr. Johns' belief that the number of eggs laid by the cuckoo varies from five to twelve appears to be erroneous (NATURE NOTES, p. 118) judging from the conclusions of Dr. Rey. In an elaborate essay on the economy and habits of this singular bird published in Marshall's "Zool. Vorträge," heft xi., the German naturalist gives it as his opinion, based on a course of very careful observations, that the average number of eggs laid by each cuckoo in a season is about twenty, and that they are laid every alternate day.

Keswick Hall, Norwich. J. H. GURNEY.

Reasoning Power in Dogs.—The following story I can verify as being perfectly true. A little child had been left by her nurse in the room and began crying. The dog of the house, a little terrier, hearing it, ran down to the kitchen, carried back in his mouth a hunk of bread, and laid it near the child, to stop her cries evidently. This is only another of the many instances of the strange affection between dogs and children.

Deal. F. M. M. P.

A Tame Canary.—A friend of mine had a very tame canary. His parents were Japanese, and he was brought up in England. When quite young his leg got broken, which in a way was, we thought, the means of making him very friendly with his owners. When quite well again he used to sleep in the old lady's room, and every morning out of his cage he would hop on the bed and lie on the old lady's neck for hours, sometimes licking her with his little tongue, and very often go to sleep there. When she was up he would make himself at home on her cap. If the window happened to be left open he would hop about

on the window-sill, and always come back again, but of course my friends did not give him many chances to go outside. He made friends with a squirrel in the house, but could not tolerate any other bird in the same room. If any one was writing at the table he would fly off to the paper, hop over it, and begin pecking at the pen; evidently the movement or sound of the pen was not to his taste. He died at the age of 14 in the old lady's lap, still showing his affection for her up to the last.

Deal. F. M. M. P.

Where are the Snakes?—Living in a very wild part of Wolmer Forest, where a great number of snakes are generally to be seen each year, I have been rather surprised at their non-appearance this season. During a warm spring, such as we have had this year, I have often come across one sunning himself on a sheltered heathy bank as early as in February. But this year scarcely one was observed until last month, and even now, in the middle of June, it is quite exceptional to meet with one. Can it be that the severe frost which has killed off all the heather and gorse in this district, has also proved fatal to the hibernating snake? V. B.

Roosting Habits of the Wren (p. 38).—It is quite true that the common wren (I do not know whether it is the case with all the species of the wren tribe) will return with its family to roost in its old nest during the winter months. May it not be probable that the basket spoken of had either served as the nest of the birds, or that the real nest had been destroyed, and the young ones, finding an equally comfortable shelter, adopted that as a substitute for their old home? The least disturbance will cause the nest to be forsaken whilst building, and a new one built, sometimes again and again, and this perhaps is the cause of so many uninhabited nests of the wren being found. In these the birds will often shelter themselves during cold winter nights. V. B.

The Chiff-Chaff.—For the last few weeks I have observed a chiff-chaff perched on the top of a weathercock which is placed on the top of a bell turret on the top of the house. Not merely now and again does he adopt this lofty position, but the whole day long he sits there uttering his shrill "cheep chap, cheep chap chee." Occasionally he will take short flights round about the house, but never long absent from his perch on the turret. Is it possible that his mate has a nest somewhere there? and if so is it not rather an unusual spot for a chiff-chaff, whose nest is generally placed on the ground, and in the neighbourhood of trees and thick bushes? V. B.

TO CORRESPONDENTS.

We must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for Nature Notes must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for Nature Notes should be addressed to the Editor, James Britten, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of Nature Notes, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. Western, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. Western, as above.

SELBORNE SOCIETY NOTICES.

Annual Report—The Council has much pleasure in forwarding to each member with this month's issue a copy of the Selborne Society's Report. Extra copies for distribution will be sent on application to Hon. Secretaries of Branches, with a view to furthering the interests of the Society, and of obtaining new members.

Wild Birds' Protection Act of 1894.—Attention is again drawn to the leaflet by Rev. H. D. Rawnsley, on the Wild Birds' Protection Act, which it is hoped will be widely distributed. Price 6d. per 100: postage 3d. extra per 100. Attention is specially drawn to the fact that in those districts where an order has been obtained from the Secretary of State, it will devolve largely upon the Branches to see that the Act is energetically put in operation.

Addition to the Selborne Library.—The Council acknowledges with thanks, Mr. "Walker Miles'" *Field Path Rambles*, in two volumes (West Kent Series and Surrey Hills Series), contributed by the publishers.

Field Club Saturday Rambles.—

July 6.—To meet at Hanwell Station (G.W.R.) at 3.7 p.m.; thence by banks of Brent to Greenford, and after tea to Northholt, Perivale and Ealing. (Broad Street 2.20, Paddington 2.30, Richmond 1.58, Ealing (G.W.R.) 3.1.) Guide Mr. Ravenshaw. Paper by Mr. Schneider.

July 13.—Merstham to Coulsdon viâ Chaldon. (Cannon Street, 2.17, London Bridge, 2.20, Charing Cross, 2.5 (S.E.R.). To meet at Merstham at 3.3. Return from Coulsdon 8.4. Return ticket 2s. 7d. Professor G. S. Boulger will lead the party, and will give a short paper on "Herb Paris." Members and friends who intend to be present at this ramble are requested to send their names to Miss Temple, 50, Clovelly Mansions, W.C., Hon. Sec. Field Club, so as to facilitate the arrangements.

July 20.—To meet at Effingham Junction (S.W.R.) at 3.6 p.m; thence viâ Ockham Common to Wisley Hut Ponds. (Waterloo, 2.17, Clapham Junction, 2.27, Richmond, 1.58.) Guide Mr. Ashdown.

July 27.—To meet at Shepperton Station, 3.5 p.m.; thence viâ Weybridge to St. George's Hills. To rendezvous at the Chalet about 5 for tea. (Waterloo, 2.15, Richmond 2.39.) Guide Mr. Maynard. Paper by Mr. Allen.

Council and Committee Meetings.—The Council will meet on Tuesdays, July 2 and August 6, at 5.30 p.m., being followed on July 2 by a meeting of the Field Club Committee: the Magazine and Leaflet Committee on Wednesdays, July 17 and August 21, at 5.30 p.m.; the Finance Committee on July 17 and August 21, at 6.30 p.m.

Bibliographical Exhibition at the Conversazione.—The volumes which were kindly lent for exhibition having now been returned to their owners, the non-delivery of any so lent should be at once reported to the Secretary.

NEWS FROM THE BRANCHES.

Pinner.—At the end of April a very interesting address on "Studies in Entomology" was given by Mrs. Brightwen at Chestnut Cottage, by the kind invitation of Dr. and Mrs. Dove. The lecturer dwelt chiefly on house or domestic insects, and commanded her usual interest and attention from a large audience.

Birmingham and Midland.—A very interesting lecture was given by Mr. J. Hiam, of Astwood Bank, at Droitwich on May 23.

The publishers of NATURE NOTES are willing to supply, gratis, back numbers of the magazine for distribution at local meetings. Carriage payable on delivery. Applications, with the quantity required, should be sent direct to John Bale & Sons, Oxford House, Great Titchfield Street, London, W.

Nature Notes:

The Selborne Society's Magazine.

No. 68. AUGUST, 1895. Vol. VI.

A BIRD-HAUNTED PINE-GROVE.

IN one of the loveliest spots along our pleasant coast lies a region that may well be called a bird-haunted pine-grove. At one end of the district there was slain, in early times, a king who was canonized, and who has ever since been designated as a saint; while at the other end, there was shot a later king whom nobody has ever thought of calling a saint, but who was, in truth, even among kings of that day, one of the saddest of sinners. Between them is a district full of objects of varied and almost unsurpassable interest. Near the first end lies a well-known headland that bears the name, slightly perverted, of another saint who was an early English bishop in the district. Among these sacred spots of saints, and death-sites of kings, are many fine rivers and estuaries, the favourite haunts of salmon, as in earlier times they had been of invading Norsemen; and between the estuaries stands the pine-grove where, half a century ago, a shrewd landowner had the foresight to call in an architect and lay out pleasant slopes for building purposes, amidst banks clothed with gorse and broom, which had long been the resorts of the woodcock.

Nowhere can you hear the sweetest songsters of our groves to greater perfection than among the pines that have now, in many parts of this region, been nurtured up, or have grown up to a great height and density. In early spring the thrushes and blackbirds make the whole district resound with their melody, singing out of sight in the pine-tops, as they love best to do. In no region do our sweetest songsters sing so beautifully as amid these pines. It is quite a mistake to suppose that birds sing everywhere with the same beauty of melody. Though their

general style of song is, no doubt, the same everywhere, the cultivated ear, trained to bird-notes, can at once tell that the song of the thrush is finer in one district than it is in another; that the flute-like notes of the blackbird are richer here than there; and that the jug-jug of the nightingale is here, perhaps, he may clearly be able to say, the most rapturous of all. And among these pines you can listen to them all in a beauty of melody unsurpassed.

It is pleasant here to look out for the coming of the spring migrants, and to catch their notes on their first arrival. In some small garden you may watch the coming in of the first whitethroat or warbler, and mark the familiarity with which, after a long flight from distant Africa, the little bird seems to recognise the spot where it was born, or where, perhaps, it might have reared a brood. Pleasant is it, too, to see the lark soaring and singing in circles over some small railway station, or to catch, in so unusual a place, the well-known note of the nightingale, and to learn from a bird-loving railway porter that the bird breeds yearly at a fitting spot near the station. The arrival of the swallows, martins and swifts can be well noted on the cliffs, along which they love to career in joyous course. The cuckoo, like the nightingale, does not seem to love the close neighbourhood of the sea, where, perhaps, these birds do not find the food they like best: they are to be heard and seen better a little way inland.

If we take a wider sweep around, we may come on moors and sand-wastes, with stunted pines and shrubby undergrowths, the only things here nourished by the sandy and gravelly soil. Here in some cultivated slope we may hear the landrail; and here, certainly, skimming past us like a phantom, we may see or hear the night-jar, finding abundant food among the moths and night-insects that are bred in multitudes on these breezy heaths. You may possibly drop on a brood of night-jars, fully feathered, but, not yet having tried their wings, only able to scamper away among the fir-twigs and heather-shoots. Among the springs and rills that ooze out in the hollows, we may find the favourite haunts of the woodcock, though the bird is getting, year by year, scarcer here, as in other regions.

In walking about the district we may note many interesting aspects of bird-life. In some parts, the cooings of the ringdove or woodpigeon are very pleasant to listen to. This is the bird that the poets call the *cushat* dove, the name being probably derived from its note; and by this name it figures in Scott's couplet:

> "In answer cooed the cushat dove,
> Her notes of peace, and rest, and love."

The notes are not always, we may observe, notes of *peace;* for the birds (presumably the males, the fighting sex,) seem often to enjoy a combat; and then they bow their heads to the

ground, and coo their loudest, and fly up in encounter, and coo again, and go on to fight again for any length of time, and seem to enjoy the duel. Of this Haydn probably knew nothing when he wrote so sweetly about these doves in his *Creation*.

Sometimes we may come on a pond or a stream where the birds take their morning bath; and it is a very interesting sight to watch them at their bathing unobserved. Once, when I was enjoying such a scene, I was puzzled by a pretty yellow and dark bird among the bathers, which I took at first to be a yellow wagtail. As I watched, this bird began to fly along the still water, and to dip in, and to fly along, dipping again and again; so that I thought the pretty bird was bathing and dipping even more freely than I had ever seen a wagtail or a swallow; but by and by I saw it resting like a beautiful leaf upon the water, and then I saw that it was dead, that it had been drowned in bathing. With some difficulty I got the bird ashore, and then I found that it was a very pretty goldfinch-canary mule, which had, no doubt, got away from much petting in some cage. Immediately below the pines, the birds are mostly content, like pious Moslems, to enjoy a bath of dust or sand, which some of them seem to like better even than water.

Outside the heaths and pine-groves we come on the breeding-places, or the resorts, of multitudes of sea-birds. Around the end sacred to the bishop and the canonized king, there are grand and mighty cliffs, wrought out below by the waves into caves and arches famous to geologists, who name from the neighbourhood some of their formations; and these cliffs, here and there upheaved in twisted and contorted strata, are, in the breeding season, tenanted by vociferous flocks of gulls and guillemots and cormorants, and other sea-birds. Here no one can get at them, from above or below; and here, accordingly, they breed, and have bred for ages, undisturbed. As we walk along, on the pine-grove side, it is very pleasant, in the quiet of early morning, to look down on small flocks of guillemots fishing along the bay; or to watch the flight of a cormorant as it wings its way for miles close to the sea, from one fishing-ground to another. And the sea-gulls, at such hard times as they come to feed up the Thames, or in the lake of St. James's Park, will come in to be fed at a window, while tits and other winter residents are supplied by a bird-feeding handmaiden under the trees below.

The estuaries into which pour the salmon-loved rivers, are visited every winter by flocks of sea-fowl that stream southwards from the summer homes of such sea-birds in Norway. In a severe winter, one of these estuaries may, perhaps, be frozen over, and thus afford sporting ground somewhat unusual on our coasts. And all of them afford sport of another kind to those who love to stalk, and to follow, and to shoot these visitors. By such sportsmen, the wary habits of the brent-geese are carefully studied; and all the other devices are adopted

and followed that are needed to circumvent the visiting sea-fowl. And so great is the ordinary Englishman's love of sport in slaughter, that, save by one's own observation, almost the only thing you can learn about these interesting visitors is how best to entrap them, or how most successfully to shoot them.

But it is, perhaps, at the end of the region that lies around the death-site of the non-canonized king that the greatest interest would, by most visitors, be found. There an ancient forest remains a forest still, uncultivated, and fortunately owing to the geological conditions of the soil, likely long to remain so. The unsaintliness of the slain monarch may be regarded as set off by the ruins of an ancient abbey, lying amidst the outlet into an estuary of streams that emanate from the forest. Here, then, we have a bit of genuine wild nature, which fitly closes in on this side a district full of such varied loveliness. But the whole region is, to the properly trained eye, full of a varied and well-nigh unsurpassable interest. For the worshipper of saints and churches there are shrines, minsters and cathedrals all over the region; such memories as those of a canonized bishop that names a headland, and of a saintly king that lingers round an ancient castle demolished in the Civil War by those iconoclasts, the Roundheads of Cromwell. And to those who may be content with a moderate reverence for mediæval saints, and who look to churches mainly for their beauty of situation or of architecture, there are spots that they may hold in reverence, and visit again and again, in much the same spirit that the pilgrims of old went to the shrine of Becket. There is one unsurpassed minster, the oldest church of all, situated in the loveliest of all lovely sites, on an estuary, and to the student of poetry consecrated by the cenotaph of one of our noblest poets, the lyrist who has sung rapturously of the soaring lark as something more than a mere bird, upon whom he has called to

> "Teach me half the gladness that thy brain must know,
> Such delightful madness from my lips would flow,
> The world should listen then, as I am listening now."

This minster presents its towers from many a broomy heath, and through many a gorse-clad glade. The student of antiquity may have his tastes gratified by visiting not far off an ancient and elevated earthwork, now quite deserted, but in earlier times crowded with buildings, religious, military, and domestic, then forming one of the most important cities in our land, and the seat of a bishop, long since transferred to a city close by, and in later times noteworthy as furnishing an admirable type of how best not to represent the people. In the upper reaches of the river whose estuary washes the poetic minster, lies the nunnery where a hapless queen spent her last days, and where, hidden by her wealth of hair, she grovelled in the dust at the feet of her forgiving husband; while, a little way off, is the finest of all those ancient works that are, to those not over-particular

about niceties, ascribed at once to those ever-convenient builders, the Druids.

But the chief of all memories in the region are those that arise for the delight of the lover of nature. Near the old abbey there lived in the last century a high priest of nature who called especial attention to the picturesque beauty of trees all over our land, more especially in the district in which he lived and laboured, where trees lay in abundance all around him. And along the route followed, for ages, by pilgrims to one shrine, we may, in another part of the district make our pilgrimage to the place where lived and died another such high priest, the quiet observer to whom we owe more than to any writer and observer whatsoever, the naturalist who called special attention to our bird-life, and who has sent many a man to the culture of that knowledge which has been found to form, in leisure, one of the great joys of life. When visiting the shrines of these naturalists, or reading their charming works, we feel a renewed ardour for such researches, and go, with an added delight, to that study to which they have so wisely directed us. From such studies, or from the visit to such shrines, we may well go,

> "Knowing that nature never did betray
> The heart that loved her: 'tis her privilege,
> Through all the years of this our life, to lead
> From joy to joy: for she can so inform
> The mind that is within us, so impress
> With quietness and beauty, and so feed
> With lofty thoughts, that neither evil tongues,
> Rash judgments, nor the sneers of selfish men,
> Nor greetings where no kindness is, nor all
> The dreary intercourse of daily life,
> Shall e'er prevail against us, or disturb
> Our cheerful faith, that all that we behold
> Is full of blessings."

In a district so rich in such objects of varied interest, we find opportunities to cultivate all tastes, and to gratify and enhance every predilection. With many of us, the taste that lasts longest, perhaps, and finds most materials for study, is one that gathers round the central region, and leads us to think of former visits, and to look forward to visits to come, in the district that may well be called, as it has been here, a bird-haunted pine-grove.

W. J. C. MILLER.

Richmond-on-Thames.

Cuckoo and Pipit.—Though most birds hold the cuckoo in great detestation, which dislike probably arises from the cuckoo bearing a distant resemblance to one of the smaller hawks, yet as is well known, there is a certain small bird which, far from regarding the cuckoo with hatred, appears fascinated by it, and follows it wherever it goes. It is said to be the meadow pipit. Has it ever been explained why this little bird follows the cuckoo so persistently?

Fyfield, Abingdon. W. H. WARNER.

WILD NATURE.

[In accordance with our promise last month, we publish the address delivered by Mrs. Brightwen at the Annual Meeting of the Selborne Society, which has been kindly revised by her for these pages.—Ed. *N.N.*]

HAVE but two excuses for venturing to address a few words to you this evening. The knowledge that I am in the presence of so many who are learned and scientific in their acquaintance with natural history must make me feel some hesitation in speaking before them. My first excuse for doing so, however, is that the Selborne Society has a very warm place in my affections. I think it is doing a great work all over England; it is helping to mould public opinion, and people who were formerly careless in their treatment of animals and birds are learning that it is a duty to show kindness towards them. My second excuse is, that I lead such an ideal life of friendship with all animated nature in my home, that I long that others should share my pleasure in winning the love of wild creatures.

For twenty-two years I have lived at "The Grove," a place which seems specially fitted to be the home of a naturalist, since it is shut off from the public on all sides by a gorse-covered common, while within are lawns and fields and woods where every wild creature may learn to know that it is safe from persecution. Generations of squirrels have been born in the trees which surround the house, and they know so well that I am their friend, that they leap in at the dining-room window two and three at a time to enjoy the nuts placed on a table for their benefit. They are clever enough to know that a store of Barcelona nuts may be found in a certain cupboard, and away they run over the floor, until having leapt on to a shelf, they sit in the box of nuts and eat and squabble and growl at each other, to our great amusement. They will take nuts out of my hand, and are in fact almost as tame as kittens. Nuthatches also enjoy the Barcelonas and sit outside the windows waiting for a handful to be thrown to them. A tame hedgehog trots up in the evening close to the drawing-room window to partake of bread and milk, and although originally wild it will receive any little dainty from my hand without the slightest fear.

I have this spring been delighted to hear the curious mating note of the lesser spotted woodpecker, and I have been fortunate enough to discern with a field glass two pairs of these birds in the top of a Scotch fir. It is very unusual to catch a glimpse of this species, but for many weeks this year their call notes have been heard in every direction in the woods around the house. The birds must either have been very numerous or else they must have some ventriloquial power.

We constantly hear the laughing note of the green woodpecker, and also its very different cry foretelling rain.

It is a very great pleasure to me to find that, by supplying suitable food for various birds and animals, and by insuring their immunity from disturbance, the number and variety of species increases yearly. I touch upon this subject in the hope that many lovers of nature may adopt these methods of winning the friendship of the interesting creatures that live around us in the country.

During the arctic cold of the past winter I was much kept indoors and, wishing still to carry on nature study, I turned my attention to various moths and other insects which we see in our houses, but whose life history is little known to us. My studies began thus.

On a bracket in my cellar a cork had lain for some months; on trying to remove it I found it was somehow attached to the bracket. I brought a candle, and on examining the cork I found it was mined with little holes, the work of a small white grub which had also fastened the cork to the bracket by strong silken threads. Of the same silk this grub had spun a small cradle or cell in which it was lying. I could but think, "Now, here is a life history going on of which I have no knowledge, but I must try and find out what the creature can be."

My books on natural history gave me no clue, so I wrote to my wine-merchant on the subject. He replied by saying that he had lost thousands of bottles of wine owing to these grubs, which he knew to be the larvæ of a small moth, but of which in twenty-five years' experience he had never seen the perfect insect. He had, however, written to a Spanish merchant, who would call and give me further information. This gentleman brought me some corks injured by this moth, and the name of which is *Oinophila V-flava*. It is hatched about April and May, and is frequently found in dry cellars, where it seeks for bottles which are not protected by wax or metal capsules, and lays its eggs in the corks. Out of these eggs are hatched white grubs which bore down through the cork until they reach the saccharin. It is on this that they feed, but in consequence of their tunnels the air reaches the wine and turns it sour and useless. Indeed if they penetrate far enough, the holes allow the wine to escape, and we find half empty bottles. The Oinophila is apt to select old sweet wine, this therefore needs special protection from the destructive pest. My next step was to visit the Natural History Museum, where by the kindness of Sir William Flower I was allowed to see specimens of the moth, and I found the species to be hardly larger than a gnat.

I find the common fur and feather moth also destroys corks in a similar way, and I have been informed of one instance in which it destroyed a ham by laying its eggs and rearing its grubs in it, but I think this needs verifying. I suggested that it must have been the work of the bacon-fly, but my informant stood firm to the statement that it was the work of the aforesaid moth; if so, it must be a remarkable grub which can adapt itself to feed upon such dissimilar things as cork, fur, feathers and ham.

The next creature I tried to learn about was the so-called Death-Watch. Even in these enlightened days there are those who believe that the tapping sound this insect makes in the skirting boards of old houses presages the decease of some member of the family. It is curious that this superstition should have been found to extend "from England to Cashmere and across India to the remotest nook of Bengal, over three thousand miles distance from the entrance of the Indian Punjaub." *

I have heard this sound in my old house for many years, but I have never been able to capture or even see the insect. There is nothing really mysterious about it, since the noise is simply a continuous tapping made by a small brown beetle, the *Anobium striatum*. It lives in old furniture and skirting boards, and as the male and female beetle cannot find each other without some signal, the male strikes his hard shelled head against the wood, the female hears the sound and replies, and thus the amorous duets go on, much to the annoyance of the sleepless and suffering. Do what we will the little torments persevere: they are beyond our reach and nothing will avail to stop the noise, although on the other hand if we should wish to set it going, I believe we can do so by tapping sharply upon any old wainscot where the beetles are known to exist. The *Anobium* is so formed that it can draw its head within the thorax, and retract its legs under its body so as to turn itself into an oval pellet; it can then traverse the round tunnels it makes in woodwork. As we desire to be a practical society, I may mention that the best mode of destroying this annoying pest is to pour corrosive sublimate dissolved in spirits of wine into the holes; this will kill the beetles and poison the wood, so as to prevent their future attacks.

I should like to say a few words about another house dweller, the common cheese-mite. It seems rather strange that, whilst we protect our dainties from the marauding cockroach, prevent weevils from devouring our peas and beans, and guard the flour barrel from meal worms, yet by general consent we allow our cheese to be the home of a species of fungus, innumerable mites, and the grub of a minute fly. Not only do we allow it, but most people prefer a mitey cheese as possessing a heightened flavour.

The first glimpse of a mass of cheese-mites through a good microscope is somewhat startling; we perceive a confused mass of struggling insects, and the idea of eating them is by no means agreeable. I would advise our young members to examine these creatures, for they are typical of a very large class of those lower forms which have for their object the destruction of substances in a state of decay. Were it not for them, these would pollute the air. We also find mites destroying specimens in insect-cases; one species is found to inhabit the joints of skeletons,

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* *Things not Generally Known.* By J. Timbs.

another is the torment of those who work in the harvest fields, for the horrible harvest-bug is also a mite. Dried fruits, honey-comb and sweetmeats are all devoured by mites of different species, in fact it is too wide a subject to dilate upon to-night, so I will only describe the appearance of the cheese-mite under the microscope. If seen in sunlight, its transparent globular body shines as though it were made of crystal. The creature can move with some agility upon its eight brownish legs, and with its tapering snout-like head it browses on the minute fragments of cheese amongst which it lives. This mite lays eggs abundantly, and also produces young alive, which may account for the rapid increase of the colonies in an ancient cheese.

The other insect which inhabits cheese is the cheese-fly; this is quite a small insect, and has black markings on its clear wings. With its long ovipositor it will lay as many as 250 eggs in the crevices of a newly made cheese; these hatch into white grubs without feet, but with horny mandibles with which the creature bores into the cheese.

This cheese-maggot has two breathing tubes in the tail and two in its head, so it can breathe at either end of its body. Lest any particles of cheese should obstruct the front pair of tubes the creature has the power of drawing over them a fold of its skin whilst it is feeding, and it then breathes through the air tubes in its tail. These creatures also have the power of emitting a liquid which corrupts the cheese and renders it suitable to be its food.

The leaping powers of this grub are truly wonderful. Swammerdam, who seems to have carefully studied this creature, says, "I have seen one whose length did not exceed a quarter of an inch leap out of a box six inches deep, that is, twenty-four times the length of its own body." These leaps it achieves by bending itself into a ring and laying hold of the skin of its tail, then suddenly letting go, its body is jerked for a considerable distance. Swammerdam devoutly remarks, "I can truly affirm that the parts of this maggot are contrived with so much art and design that one must acknowledge them to be the work of the same Omnipotent Hand which created the heavens and the earth."

Another of my house dwellers is the *Lepisma*, which frequents the kitchen hearth at night for the sake of warmth. Desiring to capture some of these, I stole down in the dead of night with a glass globe to contain my captives. Happily we have no cockroaches, else I should hardly have liked to invade the domain of those unattractive creatures. I saw plenty of lepismæ, but how to catch them was the puzzle. The situation was ludicrous. Picture an elderly lady in spectacles gazing on her kitchen hearth, watching and vainly endeavouring to catch minute fish-shaped silvery creatures darting about like flashes of lightning! At last a bright idea occurred to me. I found a soft dusting brush, and with it I quickly swept some of the lepismæ into a plate and then transferred them into my globe, so that I returned in

triumph with nine perfect specimens. They took kindly to captivity, and fed with an excellent appetite on sugar, wall paper and rotten wood. They are chiefly interesting because their silvery scales are very beautiful and are used as tests as to the power of microscopic lenses.

I will conclude with one or two practical suggestions derived from a recent visit to Woodhall Spa in Lincolnshire. I was never before in any place where so many birds could be seen and of such various kinds.

I was delighted to find this was the result of protective measures. Years ago, there were so few birds to be seen at Woodhall, owing to bird nesting and shooting, that the authorities adopted very strict measures, bills were put up everywhere saying that no nests of any kind were to be taken and no birds shot. Infringement of these rules was stringently punished. It was a joy to my Selbornian heart to see the tameness of the birds, and to find that, although I am familiar with the notes of almost all our ordinary species, there were five or six quite new to me. I saw and heard the shrike, and had a real treat in listening to the wonderful performance of a sedge or reed warbler. This bird perfectly imitated, by turns, a blackcap, a robin, a chaffinch, the sparrow's chirp and charming little bits of the nightingale's song; I listened for twenty minutes quite entranced, only twice catching a glimpse of the bird flitting through the osiers which no doubt contained its nest. Nightingales were in abundance; one could really have wished that they would take a nap in the middle of the night and allow one to have some repose.

All this shows that by wise restrictive measures we can cause these sweet song birds to increase and live quite near our dwellings.

With much regret I found that a nest had been taken in my grounds last week; the theft was traced to a farm boy, who seemed quite impenitent. He was sent to me, and I saw from his expression that no scolding would avail, so I quietly described how the little birds had built their nest, and laid the eggs, then their joy in feeding their young. "And now," said I, with tears in my eyes, "you have taken that nest and ended all their happiness. Is it of any use to you?" "No, ma'am." "What are you going to do with it?" "Nothing, ma'am"; then after a pause, "I'm *very sorry* I took it." I had appealed to him on the better side of his nature, and I think this is the right way in most cases. Give children some idea of the tender innocent lives of the birds, make them realize that their joys and sorrows are of a nature similar to their own, and gradually they will be led to be humane instead of cruel.

That boy was only a specimen of thousands of children who do not yet even know that it is illegal to take birds' nests. If every Selbornian would obtain and distribute the leaflets issued by the R.S.P.C.A., giving a list of protected birds, and have them posted up throughout our villages, it would be doing a most

useful work. Let us also take care that, so far as we have the power, water troughs for cattle and dogs are put up in all our villages and market places. We shall thus prevent much needless suffering and be doing Selbornian work.

ELIZA BRIGHTWEN.

THE DUTIES OF SELBORNIANS.*

IT is well that folk should from time to time be reminded of their duties, and Selbornians are not exempt from the common lot. Mrs. Brightwen pointed out some of these in her speech at the Annual Meeting of the Selborne Society—which we reproduce in this number—and Miss Blanche Atkinson gives an admirable summary of them in an address lately delivered before the Barmouth Branch of the Society. We propose to lay before our readers some extracts from this address, prefacing these by a little grumble on our own account.

Gilbert White's great work will always stand as a monument of careful attention and minute observation, and these qualities should characterise his followers. When these are wanting, observations are defective in value, statements become exaggerated and consequently untrustworthy, trouble is caused, temper is tried, time is wasted. The three last-named results are unduly entailed upon the Editor of NATURE NOTES by the inattention of many of his correspondents. It can hardly be their inability to read, because they are are all able to write. Yet it is difficult, except upon some such supposition, to account for the steady neglect of the simple directions to correspondents which we have now for years printed in each number. There is no single direction which is not neglected, often many times a month. Subscriptions are sent to the Editor; contributions for insertion and books for review find their way to the Secretary of the Society or to the publisher (by preference to a *former* publisher); correspondents request private answers to their questions;—in fact, it would seem as if the making of rules was an incentive to breaking them.

The vicissitudes of our copy of Miss Atkinson's pamphlet afford an excellent illustration of "How not to do it." "Books for review should be sent to the Editor," says the rule, and the address follows. But this pamphlet—for which we had previously written to its publishers, Messrs. Simpkin and Marshall, without eliciting any response—was directed to Messrs. Sotheran, who

**What are the Duties of Selbornians?* By Blanche Atkinson. London: Simpkin and Marshall. Price 4d.

published NATURE NOTES some considerable time back; by them it was forwarded to Mr. Elliot Stock, our more recent but not our present publisher; and by him it was sent to the Editor. Since this, we have received from Miss Atkinson an expression of regret that her address was not noticed in our July issue; this regret we share, but we can hardly be held responsible for it. Moreover, Miss Atkinson sends her letter to our present publishers—not to the Editor's address. All this trouble and delay might have been avoided by attending to the notice to correspondents printed in every number of NATURE NOTES.

But now for the extracts from Miss Atkinson's address. It is difficult to select where all is so good; we should like to reprint it in full. Here, however, is her—and our—view of what membership of the Society means:—

"Membership of the Selborne Society is, I take it, an open profession of love for all the wild things of Nature—the animals, birds, flowers, ferns, trees, streams, mountains. The one essential article of our creed is that all these things are good for us, as they come from the hand of Nature, and that they cannot be improved by us; that only in humbly loving, admiring, and guarding these things can we show our gratitude for the great gift of them; in short, that our fit attitude in presence of the winsome bird, of the tiny flower, of the lonely mountain crag, is reverence. And our duty grows out of our creed. We acknowledge that we can do nothing to make these gifts of Nature better or more beautiful. That is beyond us. But we all know, alas! that we can do much to injure and deface, nay, to destroy them. Our duty is, therefore, because we love, to *protect* wild animals, birds, insects, flowers, trees, rivers, mountains from the injury, defilement and defacement of enemies, and from what are almost as bad—meddlesome friends."

"Aigrettes," of course, come in for their share of attention, but we should like to see a gentle word in deprecation of the wearing of whalebone imitations thereof, so admirably executed as to be hardly distinguishable from the original. These are sometimes worn even by Selbornians, and the employment of the real thing is promoted thereby. The deception is not always detected, and "aigrette" wearers have been known to justify their conduct by a reference to "Miss X, a thorough Selbornian!" *Apropos* of the use of birds as ornaments (?), Miss Atkinson tells an amusing story:—

"Women are not consistent, I am afraid. I know a prominent member of the Society for the Prevention of Cruelty to Animals who will tell you how busy she has been in preventing cabmen from over-driving horses, while in her hat she calmly flourishes aigrettes and stuffed sea birds. I once sat in a railway carriage, miserable—because a gentle-looking lady opposite to me had two out-spread birds in rigid positions stuck in her hat. Presently she began to talk to her friends, and said she had been to a delightful lecture on birds the previous evening: 'I am very much interested in that kind of thing, and so very fond of birds,' she said. I hope she was not a member of the Selborne Society."

Miss Atkinson has a great deal to say on the protection of wild flowers, and very well she says it. She deprecates taking up plants by their roots, and rightly points out that the "protection of flowers means much more than the protection of rare flowers." Here are some practical hints:—

"There are right and wrong ways of gathering even wild flowers. We may gather them carefully, doing no harm either to plant or blossom, or we may—and often is this seen where plants are abundant—snatch at them, break them from the parent plant carelessly, tear them up by the roots, or gather the small buds which will never open. And it must be this wrong kind of gathering, and recklessly wholesale uprooting which has made the primrose scarce in places where it once was plentiful. . . . . It is grievous to follow a party of pleasure seekers in a country lane, and see the scattered fading blossoms that mark their track. A few moments ago this wild rose was sweet and lovely on its spray, rejoicing every eye that saw it; the wanton hand plucked it, and presently, because there were so many, threw it away to pluck a fresh one, and now it lies dust-besmirched, trodden under foot. It is only thoughtlessness, you say. The nosegay is made as one saunters along, picking this flower and that, just for the pleasure of putting them together, and taking delight in their gay colours. If the nosegay fades in the hot hand, or one becomes tired of holding it, it is thrown away. 'They are only common flowers.' Yes, but it is a thoughtlessness that springs from want of love for the common lovely things, the sweet lowly flowers that gladden us and comfort us—sometimes when nothing else can. The flower would be willing to give its life for our pleasure, but to be plucked and thrown aside, surely this is to despise what deserves our reverence. Let this be a rule with all true Selbornians:—Never to gather a flower merely to throw it away again. Of course, we may want it to examine, or to compare with another, and I don't mean that it is a crime to gather a flower for such a purpose, even when we do not wish to take it home and put it in water. I mean, never let us give way to the idle pulling of heaps of flowers, simply because there are so many, and then, leave them to lie and die. Bluebells, violets, anemones, primroses, honeysuckle, hawthorn—the commonest and best of our wild flowers—you have all seen them strewn on the dusty road, and I hope you have all felt sorry and indignant at the sight."

On no point is Miss Atkinson more emphatic than on the mischievous and unjustifiable practice, which it is sad to learn has received episcopal sanction, of strewing the country with paper. We have ourselves uttered a protest against this increasing nuisance; some of our most charming resorts are strewn not only with paper, but with preserved-meat tins, broken bottles, rags, and *débris* of every kind, and we trust that Selbornians will do their very best to stem the tide of ugliness, and at the least, to see that any picnic party in which they take part leaves no such traces of its visit.

"I believe that one of the greatest blessings Selbornians could confer upon a long-suffering world would be to teach people *not to throw litter, especially paper, about.* It is a little thing, yet how much difference it would make. . . . . Some people, a great many people seem to find a mysterious pleasure in tearing up their letters on the mountains, and scattering innumerable tiny bits upon the rocks or heather, so that it is impossible to pick them all up. At any favourite places where the view is specially beautiful, and where everyone loves to linger to get the full enjoyment of it, the same kind of people sit down to take their luncheon or tea, a business to which no one objects. But, the meal ended, they proceed to scatter their greasy papers, their egg-shells, their orange peel, their bones and broken bottles, far and wide. The result is a complete vulgarisation of such a spot, and the impossibility of all pleasure in it to people of any refinement. This essentially vulgar habit is due in many cases to thoughtlessness, no doubt. But those who do not think, perhaps may be made to think. Unfortunately, also, it is not only the lowest class of visitors who are guilty in this matter. I have myself seen a bishop read his letters, tear them up into fragments, and scatter them round him. One feels almost hopeless of putting a stop to so fatally prevalent a habit. We, Selbornians, have plenty to do before we shall so educate public opinion that a man will as little dream of throwing papers and litter about the mountain as he

would of throwing his remnants of food upon the carpet when dining at a friend's house. One may class, in point of vulgarity, the people who throw the fragments of their picnics about with the people who put their knives in their mouths and wipe their fingers upon the tablecloth. It is so easy to dispose of all the scraps and litter that there is no shadow of a reason why one single bit of paper, or shred of egg-shell, should be left to mark the picnic place. The fragments can be buried, or hidden beneath stones, or even carried back to be thrown into the all-purifying, all-consuming fire—the fit end for rubbish of all kinds."

Our space will not allow us to dwell longer upon this excellent address, but we strongly recommend our readers to obtain it for themselves, and to endeavour to carry out, as fully as possible, the many excellent suggestions it contains.

THE EDITOR.

IN THE WELSH MARCHES.

AS I lie in this great glen in the middle of the Welsh Marches, it is difficult to realise that the green hills around have been the silent witnesses of many turbulent scenes and sanguinary fights, both before and during the times of the rival Roses. The castle, whose ruined towers can be seen from the top of the hill—for centuries filled with warlike knights and armed retainers—is now abandoned to the daws, and nothing but the twittering of birds is heard where once echoed the rattle of armour.

Time brings changes to man and his works, but leaves few traces on these green hills. But perhaps the first thought that occurs to a town dweller when he enters this lonely glen, is of the contrast between its quietness and the turmoil of that huge city which lies a few hours distant. I close my eyes and recall for a moment the roar of the traffic, the hoarse cries of the street, the hurrying crowds, oblivious of everything but their own thoughts; and then with a sigh of relief I open them to see at my feet a little pool, whose surface is ruffled only by the struggling gnats—to hear nothing but the chirrup of the grasshopper.

A peaceful spot indeed. Shut in by high hills, with no habitation near but the farmhouse high up on the hill behind, its solitude is undisturbed by human footsteps for days together. This corner by the pool is the orchard, the haunt of chaffinch and creeper, and a tiny stream runs down a gully now overgrown with grass and brambles, but whose course can be traced by the blue of the forget-me-not. The hedgerow is honey-combed with burrows, and only temporarily disturbed by my footsteps the rabbits are all around me, some feeding, some not bigger than a rat, playing together, and making combined attacks upon their mother, who, placidly nibbling some succulent plant, seems indifferent to everything but the enjoyment of her meal. But a

slight movement of my hand, and there is a flash of white tails, and in a moment all are out of sight. In the tall pear tree opposite a squirrel has long been watching me from the far side of a branch, and having, I suppose, convinced himself that I am an inoffensive individual, he comes out and leaps from branch to branch, and then from tree to tree, until out of sight, with a graceful agility which he could never display while imprisoned in a cage.

I see something moving beneath the bushes at my feet, and presently a little moorhen ventures out towards the middle of the pool, but catching sight of me vanishes as quickly as she came. A chorus of twittering overhead causes me to look up, and the tree seems alive with a colony of long-tailed titmice. It clearly contains several families, for though these tiny birds often rear ten or a dozen young, there is quite forty flitting among the branches above me. In all kinds of curious positions they keep well to the top of the tree, and pass from twig to twig with an activity almost confusing, and before I can turn the field glasses on them so as better to watch their movements, their curious *tweet tweet* is sounded, and they fly away to a neighbouring tree. It is too late in the year to find any but a dilapidated specimen of this bird's architectural skill. Birds of other lands may build nests more curious, like the tailor bird and edible swift, but surely there is no bird in the world builds a more beautiful nest than these tiny English tits—composed mainly of moss, nine or ten inches in length, covered with spider's webs, and decorated with lichens, perfect oval in shape, a little hole near the top which seems hardly large enough to admit the little builders, and the interior warmly lined with feathers, which, when counted by an industrious naturalist, were found to number over two thousand. What a monument of industry! These birds measure, excluding the tail, less than three inches in length, and when we consider that the materials have to be searched for and doubtless carried a considerable distance, there hardly seems time in our English spring for these little birds to complete the task which building such a nest entails. But in a little more than a week, in some cases even in less time, they construct a dwelling strong enough to withstand wind and storm, warm and cosy inside, and with an exterior beautiful almost beyond description.

As I slowly climb the hill, turning for a moment to take a last look on this quiet valley, I think of the wonderful histories—could I but read—that might be gathered from the flowers which cover its slopes. The golden hawkbit, the purple blossom of the scabious, the warm red of the herb-robert, are not showing now for the first time. Year after year, century after century, they have awaited the coming of spring to push forward their green leaves, and in due time their pleasing blossoms, careless whether human eyes were ever gladdened thereby. Heedless alike of man's trouble and aspirations, they have descended in

an unbroken line from progenitors who perhaps flourished before the advent of man. What countless numbers must have bloomed and faded, and who can say what myriads are still to bloom? Witnesses of man's coming, these flowers will, perchance, witness his passing, and may still expand their modest blossoms when man and all his works have been effaced.

FRED. W. ASHLEY.

LYRICS.*

GEORGE MEREDITH's lines constantly recurred to us as we read Mr. Benson's "Lyrics":—

> "With a love exceeding the simple love of the things
> That glide in grasses or rubble of woody wreck,
> Or change their perch on a beat of quivering wings
> From branch to branch, only restful to pipe and peck.
> * * * * *
> The good physician Melampus, loving them all,
> Among them walked as a scholar that reads a book."

Mr. Benson is by way of being a modern Melampus; though he has an eye for all the quieter beauties of nature, it is her small change, so to speak—the sparrows and the newts, the "red rosetted holly-hocks," and the "orange-banded bees"—that have the most attraction for him. He has watched them and pondered about them till they have almost taken on humanity in his thought. The poem on the woodpecker pleases us the best. It is curious that the nature-poet already quoted fixes on the same trait as Mr. Benson, "Yaffles chuckle on a skim," George Meredith says;

> "Laugh, woodpecker, down in the wood;
> What do you find that moves your mirth?"

is the very first couplet of Mr. Benson's poem.

Most of the other poems are devoted to the country life. Mr. Benson would still have us look upon the country as "a land in which we can always rest," to quote the preface to his first book. Now and then, however, his philosophy fails him, and we get such a poem as Matthew Arnold might have written.

"St. Luke's Summer," again, is in the very manner of Arnold, and in other poems we come on traces of "The Scholar Gipsy," as in this stanza from "In the Garden"—

> "Learn here to be at peace, my soul;
> A truce to all unkindly fears;
> The light that shines beyond the goal
> Throws back the shadow of the years."

The followers of Arnold among contemporary poets are indeed a "small clan;" henceforward Mr. Benson must be reckoned among them. But the best of the verses are those on the "small deer" of Nature; in them the poet and the naturalist unite, and the result is very charming. Once only does Mr. Benson's felicity of phrase desert him:—

> "Where on the sandy spit the brooding throng
> Of pensive gulls pipe clear their plaintive hymn,
> Pipe all at once, like nuns at evensong."

The compliment here is rather for the gulls than the nuns. The last time we heard the sea-birds "pipe all at once" Touchstone's words seemed more fitting than Mr. Benson's—"Truly though there was no great matter in the ditty, yet the note was very untuneable."

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* *Lyrics*, by Arthur Christopher Benson. 5s. net. *The Vale of Arden and other Poems*, by Alfred Hayes. 3s. 6d. net. (London: John Lane.)

Mr. Hayes might well appropriate the lines of the greater poet:—

"In my helpless cradle I
Was breathed on by the rural Pan."

From first to last he is a singer of the country side, of

"The simple breadth of view that fills
Our famished souls, the voice that stills
The comfort of the lowly hills."

There is no very great range in his verse, the "deep authentic mountain thrill" does not shake the page, and as he himself tells us, the "sleepless surge" is not heard in Arden, but he has entirely caught the charm of leafy Warwickshire with its sunny meadows and drowsy hamlets; the glass is a small one, but it is his own.

The verse for the most part glides along with a quiet simple freshness and an almost quakerlike gravity that ranks well with the quiet life and the simple philosophy it celebrates. "A traveller! by my faith you have good reason to be sad;" that phrase expresses the philosophy of Arden to-day as it did in Shakespeare's day, and one does not look for any tricks of travel, "conscious naturalness" or the like, in Mr. Hayes' verses. Sometimes, indeed, their monosyllabic simplicity is tiresome, and the poet's fondness for short lines will not be shared by every reader. On the other hand, there comes now and then a really fine line, which makes us wonder whether Mr. Hayes has really shot his bolt.

"Not where along unlovely ways
The roaring tide of trouble flows—"

the man who could write that second line may yet accomplish higher things even than the "Vale of Arden."

A word is due to the publisher: Mr. Lane's books are always tastefully got up, but in this case the harmony between cover and contents is perfect.

J. L. H.

SELBORNIANA.

A Good Example.—Two young gentleman farmers, Messrs. Percy & Charles Seward, of Weston, near Petersfield, came lately into possession of a farm through part of which the main line of the S.W.R. runs. Here in some of the fields bordering the line (which, as is well known, goes through some of the prettiest scenery in the South of England) were stuck some of those vile modern monstrosities of quack medicine, advertisement boards, which desecrate and spoil our lovely landscapes, and which, alas! for the sake of a few paltry shillings per annum, some persons who care nothing for scenery will not hesitate to put up and ruin the surroundings. The first thing these young gentlemen did was to have the boards taken down, and the hearty thanks of all who value our lovely landscapes, and especially all Selbornians, are due to them.

A Lover of Nature.

NATURAL HISTORY NOTES AND QUERIES.

Hedgehogs and Snakes.—Is it true that hedgehogs will kill reptiles, such as snakes, vipers, and slow worms? There used to be a considerable number of the latter in this locality a few years ago. I could rarely walk through the churchyard adjoining the old parish church, down the road between the post office and village inn, or in my own garden without seeing either a dead or living specimen, for nearly all country people think these harmless creatures are as injurious as vipers; but of late I have rarely seen a slow worm, and hedgehogs have put in an appearance. My Irish terrier, "Tartar," caught a very large

hedgehog the other evening, and carried him into his kennel. Sundry yelps proclaimed the fact that Tartar had an unusual foe, no rat, and my son, going out to see the cause of the dog's discomfort, discovered and rescued the poor spiny ball he was trying to bite. It was the largest hedgehog I had ever seen, and very little the worse for its encounter, but I suspect the dog's mouth was rather tender. I prefer hedgehogs to snakes, though I know the latter are harmless. A friend (my doctor) killed a very large snake here last summer as it was crossing a pathway in the field leading from the churchyard to the house, and I feel inclined to attribute the decrease of reptiles here to the appearance of hedgehogs, just as mice and rats are more abundant on these premises since the owls have left the old church tower.

Liss, Hants. HELEN WATNEY.

Bird Notes from Sussex.—We have had two tame doves for some years living in our garden round the house, winter and summer. A few weeks ago one disappeared. I am rather anxious to replace it. I should be much obliged if you could tell me where I could obtain another, and also if you think it is likely it would stand the winter out of doors. I fancy it is the cock bird that we lost. Is it usual for them to stand the cold weather so well? They were fond of building nests, but their young ones never seemed to live. It is a great pleasure to watch the birds here. This morning I saw what was to me an unusual sight. A *full-grown* cuckoo was sitting on the fence separating our tennis lawn from the fields, and a water wagtail was taking food from the lawn to it, settling beside it and feeding it in the most affectionate manner. This was about 8 o'clock this morning, and I was standing only about fifty yards from the birds when they flew away. Later on in the day I watched with much amusement the swallows teasing the cat. She was sitting at the foot of a fountain we have, and they seemed to enjoy swooping down upon her within a few inches of her face.

Slaugham Park, Sussex. DOUGLAS LISTON SECRETAN.

Dancing Birds (p. 137).—It is a common occurrence early in the year to see our familiar friend, the house-sparrow, when busy courting, going through a queer performance closely resembling dancing. When thus engaged the bird droops its wings, and with head awry, hops up and down in a very comical fashion. I once saw two or three males thus disporting themselves round a single female. The performance had gone on for some little time, the female apparently treating the display with complete indifference, when suddenly her mood changed, and rushing at one of the performers, seized him by the crown of the head and gave him a most decided "wigging."

Fyfield, Abingdon. W. H. WARNER.

Summer Chafers.—Last Sunday, June 30, my brother called my attention to a loud buzzing noise, as he termed it "as if the bees were swarming" round an apple tree, a small mulberry tree and a holly tree, all about from six yards to twelve apart; on going to see I found on the ground, in groups of threes chiefly, the enclosed insect, a cockchafer, I believe, all about the same size and colour, they were also flying all around the trees named in great numbers, making a tremendous noise and very excited; this was about 9 p.m., getting dusk. Is this usual with cockchafers? Is it a cockchafer? If so, is it peculiar to this species? I enquired of a few people here, if they had ever known them to swarm like that; the answer was in the negative. About two hours before we had been threatened with a heavy storm; the air becoming still and dark, and a short storm of rain fell.

Seend, Melksham. LOUISA B. SCHOMBERG.

[Mr. W. F. Kirby says: "The beetle is *Rhizotrogus solstitialis*, the small cockchafer, or the summer chafer. 'It is conspicuous for the long hairs in the front of its body, and for its habit of wheeling in flight towards evening round any solitary tree.—(Rye, *British Beetles*, p. 115).' It is abundant at many places in the South of England, but in other parts of the country it is more or less local."]

Roosting Habits of the Wren (p. 139).—I have no reason to believe that the old fern basket had served as the nest of the birds. I thought the parent bird summoned the rest every evening to roost with the peculiar cry of cr-r-k, it being the first wren which appeared that uttered the cry.

E. PRICE-SAYER.

Swallows.—A pair of swallows have this week honoured me by bringing their young brood into my garden, where they fed them and where they taught them to use their wings. The young ones perched on the apple trees and the parent birds flew round and round and brought them food. It was a pretty sight.

E. PRICE-SAYER.

The Glow-worm.—Can any one tell me what is the natural food of the glow-worm? I once kept one of these wonderful little insects in a glass, supplying it with grass and earth and a few drops of water occasionally. It did not appear to touch the grass, but seemed to appreciate the moisture. Each evening at dusk it would light its lamp with the greatest punctuality, and climbing to the top of the tallest grass blade, would wave the light from side to side. The light it gave was sufficient for me to tell the time easily by my watch, and also to enable me to see my way upstairs without the aid of a candle. It was almost as punctual in putting out its lamp (generally about 11 o'clock), as it was in lighting it. But perhaps the most remarkable thing about this glow-worm was that after it was dead the light continued to appear, though in a very much less degree, at exactly the same time that it did when the insect was alive. I don't think there could have been the least doubt as to its being dead. There was no sign of life whatever. It was on its back, perfectly motionless, and was, in fact, dry and shrivelled. If placed in a dark room or cupboard in the day time there was no light, any more than there was when it was alive. The light only appeared at just the same time that it did when the insect was living. This continued for some nights, the light growing gradually less and less, until it disappeared altogether.

C. E. C.

TO CORRESPONDENTS.

H. E. W.—The suggestion is, if possible, even less tenable than the other to which we referred.

C. C.—Certainly there are singing birds in Italy: we never heard nightingales, for example, in greater perfection than in a small group of trees near the Coliseum. We cannot reply privately to questions addressed to us.

E. J. T.—Common Valerian (*Valeriana officinalis*). The demands upon our space would not allow your suggestion to be carried out, even if such lists were likely to be of general interest, which we do not think would be the case; and want of time prevents us from adopting your other suggestion.

S. E.—Please read Rule 5.

B. W. S.—Please read Rule 6.

M. G.—You will find articles on ostrich feathers in NATURE NOTES, 1890, 39; 1892, 217; we can add nothing to the information there given.

J. L. B.—Specimen too far gone for naming.

E. S.—Henbane (*Hyoscyamus niger*). See Rule 5.

WE must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c. The Editor cannot undertake to reply privately to questions.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

SELBORNE SOCIETY NOTICES.

New Branch.—The Council hears with pleasure that a new Branch is in process of formation for the district of Abinger and Shere, of which Miss L. M. Forster is the Hon. Secretary and Treasurer *pro tem.* (address :—West Hackhurst, Abinger, Dorking). Miss Forster would be glad to receive any back numbers of NATURE NOTES which members may have to spare, in order to distribute them among the school children of the district.

Field Club Saturday Rambles.—

August 3.—To meet at Sanderstead Station 3.9 p.m. (Victoria, 2.35 p.m., East Croydon, 3 p.m., London Bridge, 2.25 p.m.) Guide, Mr. E. A. Martin.

August 10.—Rye House to Ware by river bank. Meet at Rye House Station 3 p.m. (Liverpool Street, 2.15 p.m., Clapton, 1 p.m.) Return fare to Rye House, 1s. 6d. Guide, Mr. R. M. Wattson.

August 17.—To meet at Esher Station at 3 p.m. (Waterloo, 2.27 p.m., Surbiton, 2.50 p.m.) Returning from Oxshott Station, 7.31 p.m.

August 24.—Broxbourne to Wormley Woods. Meet at Broxbourne Station 2.45 p.m. (Liverpool Street, 2.15 p.m., Clapton, 1 p.m.) Return fare, 1s. 6d.

August 31.—To meet at Effingham Junction (S.W.R.) at 3.6 p.m., thence via Ockham Common toWisley Hut Ponds. (Waterloo, 2.17 p.m., Clapham Junction, 2.27 p.m., Richmond, 1.58 p.m.) Fare 1s. 9d. Guide, Mr. Ashdown.

A suggestion has been made by a correspondent that some idea should be given in the Magazine beforehand of the distances of the various rambles. This it would not always be an easy matter to do, but as ladies invariably form a fair proportion of the ramblers, the average distance may safely be placed at about three and a half miles before tea, and about the same distance afterwards. When the arrangements are made for 1896, an effort will be made to carry more completely into effect the suggestion made.

Council and Committee Meetings.—The Council will meet on August 6 and September 3, at 5.30 p.m. ; the Magazine and Leaflet Committee on August 21 and September 18, at 5.30 p.m. ; the Finance Committee on August 21 and September 18, at 6.30 p.m.

NEWS FROM THE BRANCHES.

Barmouth.—Some capital meetings have been held in connection with this Branch, at which various papers have been read, amongst them being a most interesting one by Miss Hearn (Marianne Farningham) on "The Helpfulness of Nature." The Hon. Sec., Mr. D. Arthur Hughes, M.R.C.S., is preparing an account of the doings of this active Branch since its inauguration.

Pinner.—A meeting was held in Mrs. Kemp's drawing room on July 11, to hear an interesting address on "A First Year's Collection of Insects" from Miss Margaret Skilbeck, one of the earliest members of the Pinner Branch. Mrs. Brightwen was good enough to attend and to add a few remarks, in which she complimented the young lecturer, and congratulated the Pinner Society on the advance evidently being made in the love and study of nature amongst its youthful members.

Nature Notes:
The Selborne Society's Magazine.

No. 69. SEPTEMBER, 1895. Vol. VI.

THE FALLS OF FOYERS.

"THE Fall of Foyers is the most magnificent cataract, out of all sight and hearing, in Britain. The din is quite loud enough in ordinary weather, and it is only in ordinary weather that you can approach the place from which you have a full view of its grandeur. In ordinary Highland weather—meaning thereby, weather neither very wet nor very dry—it is worth walking a thousand miles to see the Fall of Foyers."

This is Professor Wilson's description of the Falls—there are two—which, unless some very unforeseen intervention should occur, will shortly cease to exist. It seems right that the readers of NATURE NOTES should be made acquainted with the desecration that is in course of progress, and a recent visit to Foyers, made during a delightful stay at the hospitable Benedictine Monastery which stands at the head of Loch Ness, enables us to speak from personal observation as to the facts of the case.

The Duke of Westminster, as President of "The National Trust for Places of Historic Interest, or Natural Beauty"—can no simpler title be found for this body?—has discovered somewhat late in the day that the Falls of Foyers are in danger, and has written a protest which has appeared in most of the London papers, but has been refused insertion by the *Scotsman*. He points out that the matter was under discussion in the Press and in the House of Commons some months ago, and adds that "most people seem to have been left under the erroneous impression that the danger has been averted." The *Daily Chronicle* rightly points out that, so far from this being the case,

it has "repeatedly explained that these unequalled Falls are as good as destroyed. The County Council of Inverness-shire is apparently agreeing to everything the Aluminium Company desires; the foolish countryfolk of the neighbourhood believe that the Company will bring them all prosperity; and the well-to-do residents in the district are seeking to dispose of their property, as it will no longer be habitable with comfort. For months past, by argument, by appeal, by illustration, by insult, the *Daily Chronicle*, single-handed among the newspapers of Great Britain, has sought to awaken the Scottish people to their imminent disgrace."

The subject was discussed at length in the Scottish newspapers in February and March, as well as by the local authorities; but it must be confessed that the business instinct which traditionally attached to Scotchmen has been painfully manifest in the attitude adopted by the various editors. But the representations of Miss Hill Burton, a lady resident in the district, urging that at least guarantees should be exacted of the solvency of the Company which has undertaken this exploitation, and that local workmen should be employed at fair wages, received only one supporter, and—we quote the *Northern Chronicle*—"was barely tolerated by the meeting." This shows a want of courtesy of which we should not have expected a meeting of Scotchmen to have been guilty, as well as an absence of consideration for those whose benefit is made one pretext for the spoliation.

The British Aluminium Company thus receives the support of the press and of the local proprietors, and the beginning of its operations was hailed with carefully prepared enthusiasm. Since the time when Artemus Ward arranged, for a stipulated sum, to be "overwhelmed with an unexpected honour" in the shape of a serenade from the Baldinsville Brass Band, there has been no more fictitious enthusiasm than that which, says "An Eye Witness," was manufactured by a party of lawyers' clerks and a cart-load of rum barrels to signalize the taking possession of the Foyers estate. "All the neighbourhood saw the bonfire, and many newspapers, notably the *Scotsman*, testified to the enthusiasm of the Stratherrick crofters. There really was a certain enthusiasm while bonfires blazed and whisky flowed, but since the people find promises disappointing, the local inns ruined, the steamboat traffic damaged, and the prosperous residents preparing to depart, they are coming to their senses."

The hollowness of the justifications given for the establishment of the works is already manifest. The *Glasgow Herald*, the *Northern Chronicle*, and other papers put forward the advantages that would arise to the neighbourhood. "The extensive preparatory works will provide temporary work and wages for a large number of men. Afterwards, a nice village, possessing crofts—combining wage-earning with rural amenities—will spring up near the side of the loch, which will not be a mining village,

and have nothing of the squalor thereof." Thus the *Northern Chronicle* of February 27, unmindful of the Irishman's wise conclusion that it is safer to prophesy after the event. Here is an account, by a resident in the district, of what has actually resulted:—"The works do not employ hundreds of men in all, and of them not a sixth part are natives of the district, and there will be fewer still when the preliminary operations are complete, and only skilled labour is required. The remainder of the men now employed are the usual type of navvies, English, Scotch and Irish, who have descended on and taken possession of this hitherto peaceful spot, and after the manner of their kind, are working a little, fighting and drinking more, besieging the local inns for whisky, and driving away from what many of your readers know as one of the most charming hotels in Britain those very visitors whose prolonged residence is universally admitted to be of real benefit to the district."* The "rural amenities" of the *Northern Chronicle* seem curiously absent from this account.

Another line of defence adopted by the promoters and supporters of the company is to maintain that the Falls will not be injured. True, there will be no water in them, but that "is a mere detail." Our readers will hardly believe that such a statement as this could be penned seriously, but here is the extract from a letter by a person named Common, speaking on behalf of the Company, published in the *Scotsman*, a paper which refused to publish the Duke of Westminster's remonstrance:—"The damage to the scenery by their operations will be *nil*, and if there is damage it must be put up with. Nothing would destroy the natural beauty of that glen, the fact of there being water in it or not is a mere detail!"

Here is the report of the resident already quoted, a report which we can confirm from personal inspection, and which, indeed, is studiously moderate in tone. "The beautiful beech trees fringing the loch are hacked away and rooted out to make room for tramway lines; hideous trenches destined for huge steel pipes plough their way through bracken and underwood; the very antechamber of the Falls is disfigured by great masses of stones and rubbish flung out by hundreds of tons from the great tunnel which is to carry off every drop of the water which has foamed, thundered for ages into the abyss below. Yes, this is the prospect before us. The Falls are to vanish for ever, to be utterly swallowed up in pipes of steel, and worst of all, the surrounding greenery is to be blackened and blighted by the same fatal fumes which (as a recent eye-witness assures us) have turned the verdant valley of Neuhausen into a scene of godforsaken barrenness and desolation."

The Duke of Westminster tells us more about the "fumes,"

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* *Daily Chronicle*, August 7.

and adds further gloom to the already dark picture. "The proposed factory will not only destroy the finest waterfall in the United Kingdom, it will also emit hydro-fluoric acid gas, which will be most destructive to vegetation in the neighbourhood. In addition to this, it appears that the manufacture of aluminium will certainly create great spoil banks, which the company are under no obligation to remove should they at any time suspend operations, nor in the event of such a contingency arising are they liable to restore the Lakes of Stratherrick to their former levels, or to divert the water again to its original channel."

One practical evidence of the way in which the operations have already affected the neighbourhood is to be found in the fact that the Highland steamers to Inverness, which were in the habit of waiting at Foyer's Pier for an hour or so to afford passengers an opportunity of visiting the Falls, no longer do so. "When making the trip to Inverness last week," writes a correspondent of the *Chronicle*, "I found a notice on the steamer intimating that from July 24 last no time will, in future, be allowed at Foyers for the purpose mentioned, and on enquiring the reason I was informed that the works proceeding at the Falls were now considered to be of so dangerous a nature as to render it unsafe for tourists by the boats to call there. This in itself speaks volumes."

Such are, very briefly, the facts of this distressing case. It would be easy to dilate further upon them, for the good Fathers at Fort Augustus have lent us a scrap-book full of cuttings bearing on the subject; but enough has been said to arouse the attention of Selbornians and others, though we fear nothing can be done to arrest the mischief.

In spite of societies and agitations, matters of this kind are in urgent need of attention. Here is a letter contributed to the *Chronicle* of August 7, appropriately headed, "Where is the Commons Preservation Society?" The writer dates from Studland, near Wareham, Dorset, and says:—

"The country round about the village at which I am staying is strangely beautiful. The lord of the manor lives elsewhere, and has let the estate to a wealthy London trader. This gentleman is a 'gamepreservomaniac,' and the place bristles with barbed wire and notice-boards. There are rabbits—no villager dare keep a dog, or even a cat. The wild picturesque common stretches up to the sea-shore. There are notice-boards—'Road only; private estate; trespassers will be prosecuted.' And mark that there is no fence around this common, which has been free and open from the beginning of time.

"Parish council? It has not met for three months. And please note, the chairman is the vicar, naturally the landlord's friend; and could a yearly tenant, unless he be a veritable village Hampden, protest against a landlord's action, be that tenant on the parish council or not?

"Sir, enormities of this description are surely perpetrated in every small village in the kingdom. The villager is helpless, the visitor merely a bird of passage, and too indolent to do more than protest. But is there no association among the existing thousands of such bodies that will take up a case such as this?

"There are landless Londoners now spending their holiday in every hole and corner of the country, and the air is thick with impotent curses. Why should not

the *Daily Chronicle*, that has done so much for London, befriend also the country-loving Londoner, and print the protest of the sufferers from barbed wire, and point out to them what steps should be taken, and where redress can be found? And surely there are some of us who will spare neither time, nor trouble, nor money in the endeavour to convince the haughty plutocrat that even in a remote village his arrogance may be pushed too far. I enclose my card."

Here is another complaint from the same issue:—

"Dr. J. Fletcher Little writes, calling attention to the threatened loss of the public rights over Burley and Hawksworth Moors, in Yorkshire. A few weeks ago some persons who were walking over the land in question were warned off by a gamekeeper as trespassers, and since that time there have been numerous complaints of similar molestation of people who imagined they were merely exercising a public right. Dr. Little points out that these moors are unenclosed and 'unregulated,' and that the public have crossed them at will in all directions from time immemorial. They are, he says, fragments that remain to the people after vast tracts have been filched away, and their value becomes greater as the people of the West Riding continue to aggregate in large towns full of mills, workshops, and warehouses. The views are extensive and fine, the purity of the air is unrivalled, and the antiquities are numerous and interesting. This, also, is a case on which the Commons Preservation Society would do well to keep a watchful eye."

Last year we spoke of the state of the trees in our London streets—a matter which surely demands the attention of all interested in the welfare of the metropolis. We propose next month to return to this subject, and only mention it now as connected in some measure with the other cases mentioned.

It is, indeed, but seldom that public feeling is aroused against the land-grabbers and despoilers who, in spite of protests, continue their unprincipled actions; and it is, therefore, with much satisfaction that we record the prompt action of the Bournemouth Town Council, as recorded in the *Daily Chronicle* of August 8. Having decided on August 6 that the land filched from the public should be restored, the Council at once set to work to carry out their decision.

"The Bournemouth Town Council lost no time in giving effect to their decision of Tuesday to clear away the obstruction placed in the South Road at Bournemouth by the Mayor (Mr. Merton Russell Coates) and Sir George Meyrick (the ground landlord). The road, which leads to the cliff front, was originally 30ft. wide, and ran between East Cliff Hall, the mayor's private residence, and the Royal Bath Hotel, of which he also is the proprietor. It was narrowed in December last to 7ft., the odd 23ft. being thrown into the grounds of East Cliff Hall, and a large bank of earth was planted with shrubs, while a privet and gorse hedge was planted on the sea frontage. A carriage drive, entered by a new gateway, was made to the Bath Road, and a handsome summer-house was fixed in an elevated corner of the newly-acquired ground looking out to sea. At three o'clock yesterday morning the assistant surveyor (Mr. Smith) and several assistants, with fifty-six men and a dozen horses and carts, arrived on the spot. The first sod in the banks was cut out as the pier clock chimed the early hour, and by ten o'clock the road was cleared and restored to its original width. There was no opposition at all. The mayor was away from Bournemouth, and no notice was taken of the proceedings from either his residence or the hotel. The earth was tipped over the cliffs to fill up gaps in the front, and the turf sods were used to strengthen several weak places in the cliffs. The shrubs were carted to the public pleasure grounds and replanted there, and the summer-house was placed bodily on a trolley and carried to the corporation yard. Few people were about at the early hour, the affair being kept very secret; but as the town awoke the

news spread, and there were crowds of people assembled during the morning, the bulk of whom showed the liveliest satisfaction."*

We shall await with interest the result of this spirited conduct; meanwhile we commend the action of the Bournemouth Town Council to all who wish to see our public rights and our public ways preserved.

THE EDITOR.

P.S.—Since the above was in type, the attention of the First Commissioner has been called to the proceedings of a body of gentlemen forming what is called "The East Sheen Common Preservation Society." They are said to have "established golf links on the common, and loud complaints are made as to the manner in which the turf is being burnt and cut down and the gravel carted off the common." Such action on the part of a "Common Preservation Society" reads like an episode in a Gilbert-and-Sullivan opera, but it is not this that has aroused public opinion. A certain road over the common, over which there is said to be a public right of way, has been blocked by this Society, and when the Duchess of York with the infant Prince wished to drive across it she was unable to do so, as the gate giving admission was locked. We are glad that this has happened, as it will certainly cause the matter to be investigated; but we fail to see that any principle is involved in the fact that a royal personage is in question. If there be a right of way, any one is entitled to use the road, be he prince or pauper; if not, not. We shall await with interest the report of the First Commissioner on the action of this remarkable "Common Preservation Society."—ED. *N.N.*

MIGRATION AS OBSERVED IN HELIGOLAND.†

NEW are the lovers of birds who are not aware that of late years the mystery of migration has been claiming unusual attention, and most readers of ornithological literature have heard something of the remarkable observations made by Mr. Gätke on this subject in Heligoland. His book, published five years ago, was at first only to be had in the original German, but now, thanks to Mr. Rosenstock's excellent translation, is within the reach of English readers. The book, a large one, is divided into three parts; the first and most important part deals with the subject of migration generally. It may be interesting here to note that the author went to live in

* It appears from later reports that the Mayor had nothing to do with the alteration.

† *Heligoland as an Ornithological Observatory*, by Heinrich Gätke, translated by Rudolph Rosenstock, M.A.Oxon. Published by David Douglas, Edinburgh.

Heligoland more than fifty years ago on account of his health, his profession as a marine painter accounting for his choice of this rocky island, and gradually "Nature herself put the pen in his hand," as he expresses it, and prompted him to record his observations. The opening chapter deals with the course of migration in Heligoland, and includes a record of the bird life of the months. In January there is not much to record beyond the occasional visits of guillemots to their breeding places on the cliffs (guillemots, auks, and the inevitable sparrows would seem to be the only birds who breed regularly on that rocky island, bereft as it is of woods and groves); the guillemots come in thousands to make occasional visits of inspection during the winter months, when, "amid the exchange of endless obeisances and incessant altercations, they carry on an animated conversation, in which everyone of them seems to be talking, but not one to be listening." Then, according to the mildness of the weather, in January, come detachments of starlings and skylarks, the largeness of the flocks depending on the mildness of the temperature. In February roving companies of the missel-thrush and fieldfare may be seen, and should the month be fine and mild, large flocks of starlings, skylarks, plovers, and occasional pied and grey wagtails make their appearance.

With the advent of March there is much to record. The stonechat may be seen, the "messenger of spring," as it is called there, and flocks of larks and starlings still pass. Snow buntings appear in swarms. Rooks begin their regular migration, and, as the month goes on, "great flocks of thousands of hooded crows, rooks and jackdaws may be seen passing over the island during the whole month." The hedge-sparrow, described as a most confiding little bird, makes a visit to the Heligoland gardens, together with redbreasts and male chaffinches.

April brings yet more changes in bird life. The island is alive with redbreasts, willow wrens, yellow wagtails and finches, and flocks of hooded crows and jackdaws still pass over. May is the month, however, when the spring migration reaches a climax. Birds of prey of divers kinds, flycatchers, warblers, blue-headed wagtails, tree pipits, finches, swallows and swifts pass over, and cuckoos are seen daily, and sometimes heard, whilst the breeding places of the guillemots present a scene of wonderful animation. After enumerating these and many other birds the author remarks: "During the hours of night this great host of wanderers sweeps across and past the island without taking rest thereon; some of the birds travelling singly, others in smaller or larger groups, according to the nature of the species—all striving to gain their far-off homes. About sunrise, however, and during the early hours of the forenoon, thousands and tens of thousands of these birds break their journey; some, too, at sunset, in order to make a few hours' stay on the island."

In June there is but little to interest the ornithologist, although up to the middle of the month some of the swallows,

flycatchers and warblers continue their migration, and towards the end of the month, and through July, old birds, such as starlings, or thrushes, may be seen occasionally flying aimlessly about, these being individuals whose nests and broods have been destroyed, or who have lost their mates, and find it too late to begin over again. Towards the end of June, however, is the first indication of the reflux migration wave, in the companies of young starlings, which daily increase, until, in July, they reach their thousands.

In July the interest increases, and considerable numbers of young birds swell the list of migrants. In addition to young starlings, there are young lapwings and golden and ringed plovers, and redshanks ; old cuckoos, too, take their way again, and the guillemots conduct their young out to sea. Young sparrows (sparrows, as before remarked, breed on this inhospitable island !) disappear.

With August the full tide of migration sets in. Snipes and plovers pass over the island in great flocks the night through, and if at the end of August the weather be warm and clear, with a light south-east or south wind, there come young flycatchers, warblers, redstarts and wagtails innumerable. The wryneck breaks his journey to refresh himself on ants, the young cuckoos stop to seek for caterpillars ; swifts, in large noisy flocks pass over, and crowds of crossbills are seen at intervals. These last-named birds are, singularly enough, always seen in wet or stormy weather, and many young sparrow-hawks and other birds of prey are seen towards the close of this month.

In September the numbers of the August migrants reach a climax, especially if the first fortnight of the month be fine. The swallows now pass through in great companies. Wagtails of different kinds appear in large numbers, but mostly young birds. Towards the middle of the month the fly-catchers decrease in numbers, while redstarts and willow wrens increase. Towards the end of the month thrushes and chaffinches commence their migration, and old birds of prey in solitary examples are seen.

But as the spring migration reaches a climax in May, thus the autumn migration culminates in October, and is a yet more wonderful phenomenon. Hooded crows, the month through, travel in never-ending swarms of hundreds and thousands over the islands, and masses of starlings. In fine weather, early in the month, in the early morning, thrushes come in swarms, and the number of skylarks defies computation. Clouds of chaffinches may be seen, and chiff-chaffs, redbreasts, whitethroats, hedge-sparrows, bramblings, titmice, &c., make their appearance in greater or less flights, according to the weather. The scene from the lighthouse must be one of extraordinary weirdness and grandeur. The author thus describes it:—"The darkness, equally dense on all sides, amid which the lighthouse appears to float like some great luminous body, the broad beams which

radiate from it in all directions, and in the dim air seem to stretch into infinite space; the consciousness of the near presence of the great sea around, and the complete absence of every sound in surrounding Nature, all these combine to form a picture of the utmost solemnity and grandeur." Mr. Gätke then tells us how this stillness is broken by the cry of a thrush, followed by the call note of a lark. Suddenly the ghük of a blackbird is heard, followed by a flock of sand-pipers. The skylarks increase in numbers, and are heard approaching and departing, the calls of the snipe, golden plover and curlew follow in rapid succession, followed by the fieldfare and redwing.

Then come quick cries from swarms of knots, accompanied by many unknown cries, some of which are supposed to proceed from the heron and its relations. "The whole sky is now filled with a babel of hundreds of thousands of voices, and as we approach the lighthouse there presents itself to the eye a scene which more than confirms the experience of the ear. Under the intense glare of the light, swarms of larks, starlings and thrushes career around in ever varying density, like showers of brilliant sparks or huge snowflakes driven onwards by a gale, and continuously replaced as they disappear by freshly arriving multitudes. Mingled with these birds are large numbers of golden plovers, lapwings, curlews and sand-pipers. Now and again, too, a woodcock is seen, or an owl with slow beating of the wings, emerges from the darkness into the circle of light, but again speedily vanishes, accompanied by the plaintive cry of an unhappy thrush that has become its prey."

The short, raw cold days of November drive many northern birds from their homes. Linnets, greenfinches and shorelarks appear in great companies, and snow-buntings, described as "boisterous birds," hooded crows, starlings, fieldfares and redwings continue their migration late into the month; and wild geese and ducks rush past with restless speed. Rare birds of prey are now seen, and of sea-birds, the kittiwake defies all attempts at computation, while many species of gulls, old and young, may be seen soaring over the sea, and others too numerous to name.

In December the migration of the birds depends much on the prevailing temperature of the month. Should the weather be mild, starlings, blackbirds, fieldfares and redwings continue their migration up to the close of the year. But all is changed should a frost and sharp east wind set in early. In this case, all the birds just named, as well as golden plovers, curlews, oyster-catchers and sand-pipers rush in one night towards their winter quarters, and countless flocks of swans, geese and ducks, &c., may be seen in the clouds over the sea by day. If the frost be accompanied with a heavy fall of snow, hundreds of thousands of skylarks, twites, linnets, greenfinches, &c., arrive the next day, and should the severe weather continue, sea-birds, such as northern diving

ducks, scaups, &c., come in quick succession. A long frost brings with it interesting scenes of northern bird life, as a great ice field is driven nearer and nearer to Heligoland, until it touches the island, and, as the author describes, the scene "towards north, east and south, farther than the eye can reach, there stretches the vast, white and unbroken ice field. In lea of its, for the most part, sharply defined margin, a perfect calm prevails, and the smooth surface of the sea is covered with myriads of ducks in glossy black plumage. . . . I have known days on which I have seen, far as the eye could reach, in all quarters of the sky, swarms of birds crossing each other in all directions, and more astonishing still, on looking upward, have beheld above me a teeming multitude, so thick that the highest swarms presented the appearance of scarcely discernible clouds of dust."

Thus, amidst almost Arctic surroundings, in a severe winter the year dies out.

H. J. Ormerod.

A VILLAGE NATURAL HISTORY CLASS.

MY Natural History class was started last autumn. In our village school I announced my wish to form such a class for boys, with the result that out of a number who wished to join it I selected seventeen, feeling doubtful if I could keep a larger number interested and orderly. We met in the infant school, on Fridays. I wanted chiefly to teach them about birds, how to know the different kinds by sight, and to give them a few ideas about the life history of each. My father's *History of British Birds* (Rev. F. O. Morris) was my guide. In preparing my lesson, I read carefully through five or six of the birds, then wrote down shortly the salient points in the history of each, *i.e.*, if it was rare or common, its food, use, &c., &c., then I also got up a chapter, or part of one, in Mr. Wood's charming book, *The Brook and its Banks*, omitting any portions which seemed not so suitable for my hearers.

Thus prepared, I sat at a table with my seventeen pupils round me, and after the first Friday I began by asking questions about what they had heard the previous week, giving them marks according to their answers, *i.e.*, when a question was rightly answered I put a dot after their names on a paper which I kept from week to week. After this I took the first volume of the *Birds*, showed the pictures of the five or six I had got up, and while they eagerly looked, told them all I could about each, and answered any questions they asked; then read my piece from *The Brook and its Banks*, making a few passing comments, and asking the meaning of any hard words, by which

time we had generally got to the end of the hour, which seemed long enough to keep the boys interested. Some of the answers I got were amusing: "What is the meaning of a rodent animal?" "One which goes on roads," I was told. "Do you know what anatomy means?" "That which tells us about gnats," was the reply. As a whole, the boys were very attentive, and much interested, but as "boys will be boys," there was sometimes rather too much noise and larking on the part of a few. When we begin again next autumn, I shall have to weed out those who came more for fun than study.

I had the class for eighteen weeks, and was much pleased at the great improvement shown in the knowledge of many of the boys at the end of the time. I gave a book prize to the one who gained most marks. Since then, in order to give them a chance of applying the knowledge gained I set them questions which they are to answer in writing, and I shall give books on Natural History as prizes for the best answers. I also set a different lot of easier questions for the whole school to compete for, and this I have done for the last two years. My questions for 1894 were given in NATURE NOTES. I can but hope that some of your readers may be induced to form classes of a like kind for boys or girls, as I cannot but think that increased knowledge will induce greater kindness to, and interest in, our "friends in fur and feathers."

Horsell Vicarage, Woking. ROSE TURLE.

THE PRESERVATION OF FOOTPATHS AND OPEN SPACES.*

PERHAPS there is no subject that affects the convenience and very often the welfare and happiness of dwellers in rural districts than the preservation of footpaths for public use. The best way to estimate their value is to imagine what the country would be like without them. One has but to reflect on the discomfort of having only the dusty high-road to walk on in the heat of summer, all access to cool and shady meadows and woods being barred by the time-worn but empty threat, "Trespassers will be prosecuted with the utmost rigour of the law." Numerous as our footpaths happily are, there are some parts that are not so abundantly supplied with them as they should be, especially large agricultural districts, where, though they are just as much needed as in pas-

* *The Footpath Manual: giving an outline of the Law relating to Public Footpaths, Roads, &c., for the use of District and Parish Councils, &c.*, by Henry Allnutt, Secretary to the National Footpaths Preservation Society. London: 42, Essex Street, Strand, W.C., 1895, price 1s.

toral, the continual ploughing up of the soil has ever acted as a deterrent to their continuance.

At the present time, when parish and district councils have but lately been established and endowed with considerable powers favourable to the maintenance of rights of way, Mr. Henry Allnutt, the Secretary of the National Footpaths Preservation Society, has done a good work in bringing out a small manual on the subject.

It will be impossible to go further than to briefly indicate a few of the more important points, especially with regard to the law of footpaths, which Mr. Allnutt has brought forward. One obvious advantage of footpaths is the saving of time in getting from place to place. This ought to commend itself to our newest landed proprietors, who are generally successful business men, but who, as the compiler tells us, are far worse offenders in closing footpaths on estates than old county families and the aristocracy.

Law expenses in contesting rights of way are always very heavy. It is therefore better to defend an action than to bring one.

If a railway company desires to extinguish a footpath as interfering with the formation of a new road, the right of way must be clearly described in the Act sanctioning the construction of the line.

If a thing so intolerable to some landowners as a footpath is to be put up with at all, these lords of the soil have determined to make the way as unpleasant as possible to those using it, by the erection of barbed wire or fish-hook wire fences. These vestiges of mediæval barbarity entail not only destruction of clothing but even personal danger. A perusal of the Barbed Wire Act (1893), printed on pp. 26, 27 of this manual, will show that as soon as barbed wire fences bordering any thoroughfare whatever can be proved a nuisance, steps may be taken for their removal.

A misprint occurs on p. 28, where "Vigo" should read "Virgo," and the "Finchley station of the L. & N.W.R.," (p. 13) does not exist, the Great Northern Railway alone having a station there.

A list of woodcuts of convenient stiles and rustic seats concludes the manual; a concise index, however—the natural and indispensable termination to every book of reference—is here wanting to complete the work.

By way of appendix it may be stated that we have received, through the kindness of Miss Octavia Hill, a couple of important circulars issued by the Kent and Surrey Committee of the Commons Preservation Society. One of these is an appeal to place Ham Common under the regulation of the Metropolitan Commons Act, the step which the authors of this appeal rightly consider so urgent should have been taken long ago. The other circular—which has more bearing on the subject under review—

is a brief account of an encroachment on a roadside waste at Ewhurst, near Gomshall in Surrey. To this encroachment the District Council have offered but a halting opposition, which has finally resulted in their taking no action whatever. This amounts to an abnegation of the very powers delegated to them by the Local Government Act of 1894. It is strongly to be hoped that the Commons Preservation Society will in their next annual report emulate the sister society whose manual we have noticed, in plainly detailing the duties and powers of District Councils with regard to the preservation of open spaces of all kinds, and thus do something to remedy the bad start made by some members of our youngest legislative body in this direction.

ARCHIBALD CLARKE.

THE BARN OWL IN CAPTIVITY.

IT will, I think, be of interest to readers of NATURE NOTES to hear that I have succeeded in getting barn owls to breed in captivity, and perhaps a few details may not be unwelcome. My first barn owl I bought in Seven Dials, six years ago; he hung there in a small cage for some weeks, and each time I passed him he seemed to look more black and miserable, until at last I felt I could look at him no longer in his misery, so I bought him before he had turned quite into a black bird. He had no tail, so I named him Dodo. For a long time he was one of my studio companions, and for his next door neighbour he had a little Capuchin monkey, who took great interest in him, especially when he took it into his head to screech. Since the first day I had him—when he was greatly in need of a bath—I have kept him always supplied with water, which to owls, in common with all other birds, is so essential to health. The bath should be shallow, and sufficiently large for the bird to get right in and have a thorough wash; in too deep water they not unfrequently drown themselves. To see a young owl take his first bath is a most amusing sight; the antics that a pair of young long-eared owls which I had reared from the nest, went through when I first supplied them with their bath, would make a story in itself; but I will not divert from my narrative of Dodo.

Three years ago, when I left London, I brought my owl with me, and built him a large cage under cover out of doors. He soon grew a tail and put on the most perfect plumage, and the wild owls flying round my house would answer his calls. Thinking that I might possibly get one to enter his cage, I fitted a wire door which could only open from the outside, and although it did not answer the purpose for which I intended it, it served

Dodo well, for he used it as a knocker which he would sound when hungry, until annoyed by the noise he made, I went to feed him. This is but one of many incidents which go to show the intelligence of owls, and the cunning which was displayed by one of the nightly visitors which I tried to trap is worth recording.

I was anxious to find Dodo a mate, and as scarcely a night passed in which this wild owl did not visit him, I decided to construct a net trap in which to catch it. The trap made, I placed it outside the cage and baited it with a dead rat, but he carefully alighted in such a manner as to spring the trap without being caught, and then, pulling the head of the rat through the netting, partook of his supper and departed. At last I so far improved my trap that it was no longer possible for him to spring it except from the front, and then I caught him. Unfortunately Dodo and the new comer did not agree, and my wild owl got injured, and in spite of every care it died. I was sorry then that I had got the best of it over the trap.

As I had made up my mind to get a mate for Dodo, I bought one, and wishing to give him still better quarters, I gave him my summer house for a home. In order to give them as far as possible what they would seek in nature, I secured a large hollow branch of an elm tree, and placed it in the centre in such a position that they could nest in it. The very first day that I turned them in, they took to it, and although I rarely saw them afterwards in the daytime, except when I entered their cage, I put up with that, happy in the thought of possible young. Last summer eggs were laid, but they got buried in the loose chips of rotten wood and so were lost. One step being obtained, I began to hope for success, so this spring I supplied them with material to build, and when the breeding season began I avoided entering the cage as much as possible. On July 4, I was rewarded by hearing the faint cry of young just hatched, which daily increases in strength, and is accompanied by the soft notes of the mother-bird, which are so different from the shrill cry uttered whilst hunting, and which I had previously had opportunity to study in nature. I hope now to succeed in assisting the parent birds to successfully rear their young, but to keep them supplied with a sufficient quantity of suitable food is not an easy matter, particularly if further birds should be hatched out.

ROBERT MORLEY.

Tilford, Farnham.

WILD FLOWERS IN ART AND NATURE.*

Mr. Sparkes is the principal of the National Art Training School at South Kensington, and is thus obviously in a position to instruct with authority in the art of flower-painting, and Mr. H. G. Moon is known as one of our best floral draughtsmen. Mr. Burbidge supplies the necessary botanical information, and the three authors have combined to produce a very handsome book, further adorned by a miscellaneous assortment of headings and tailpieces, some of which are very pretty. There are also some graceful drawings by Mr. H. Rylands, which do not seem altogether in place, and have, we fancy, dropped in from elsewhere, perhaps from the *English Illustrated Magazine*, whence some of the headings have also been transferred.

We do not think Mr. Moon is at his best here: many of his flower drawings in the *Garden*, for example, have been much more satisfactory than any of those in this volume. Some are distinctly good, such as the Sweet Violet, the Campions, the Honeysuckle, the Cowslip, and the Harebell, but others do not please us, such as the Wild Hyacinth, the Yellow Iris and the Forget-me-not. But if we must say what we think, it seems to us that nothing in the volume is so good as the charming design of ox-eye daisies in silver on a dark ground which adorns the cover. Mr. Burbidge's letter-press is pleasant and readable, and Mr. Sparkes's instructions are practical. The plates can be obtained separately, on boards, at a shilling each, or three mounted together for half-a-crown; their style of execution, however, renders them less suitable for school decoration than the large flower pictures issued by the Art for Schools Association.

Messrs. Nelson no doubt have their reasons for bringing out five separate little books, dealing respectively with the flowers of the copse, the lane, the corn-field, the marsh, and the common. They are nicely printed, prettily bound, and generally attractive; but we would suggest to the publishers that it would be well to issue them also in one volume, in which case the illustrations which now adorn the outsides of the covers might find a more suitable place within them. The contents do not differ materially from those of other books of the kind; there is the same lavish use of cuts, good, bad and indifferent, from various sources, which we have more than once deprecated—side by side on the same page we have a whole plant of *Arum* about half the size of a single leaf of Sheep's Sorrel, while on another page a ligulate flower of Dandelion is about twice as big as the whole blossom of a Calceolaria. The information is conveyed in the form of a dialogue, and each book has a nice didactic little preface, reminding one of the good old days of "Peter Parley." Seeing, however, that Dr. Cooke puts his name at the end of each preface, we do not see why every book is stated in the title-page to be by "Uncle Matt," especially as the author's name is not Matthew. It is somewhat startling to find pictures of the india-rubber tree and the cow tree in the book on the copse; but few publishers are proof against the temptation to drag in cuts they may happen to have in stock, however inappropriate they may be. Among other matters, Dr. Cooke has settled the much-disputed question as to the birthplace of St. Patrick, who is described as a Welshman. We are glad to note that each volume has an index.

No drawings by Mr. Hulme that we have seen have pleased us so much as the outlines which illustrate his "Wild Flowers" books. The two series contain the same pictures, but in one there is a short description of the plant, a specimen of which is to be fastened on the opposite page, while the other gives directions for colouring, the blank space being intended for a copy of the drawing—a purpose for which we think it is better suited. Each part contains twelve pictures. We do not think so cheap a series of representations has ever been issued, and we cordially recommend the two series to all who have to do with the education and training of the young.

**Wild Flowers in Art and Nature*, by J. C. L. Sparkes and F. W. Burbidge, with coloured plates by H. G. Moon. London: Edward Arnold. 21s. *New Books on Wild Flowers for the Young*, by M. C. Cooke. London: Nelson, 5 vols. 1s. each. *The Wild Flowers Drawing and Painting Book*, and *The Wild Flowers Collecting Book*, by F. E. Hulme. London: Cassell, each 6 parts. 4d. each.

"SCIENCE" UP TO DATE.*

MR. EDWARD CLODD and Mr. Grant Allen are lucky beyond their fellows. For them there are no gaps in our knowledge, no weak points in our hypotheses. What for a Darwin or a Wallace is an abiding mystery is for them crystal clear, and they can, with the utmost confidence, expound the whole history of things which men who have spent their lives in research would give a king's ransom to know. Calling their accounts each a "story," they naturally claim the immemorial privilege of the story-teller, and with the consummation to be reached ever in view, arrange all the details of their plot accordingly. The plan has obvious advantages, and it might not be easy by any other method to accomplish many of the feats that they achieve. Thus, Mr. Clodd, anxious to impress us with the profound truth that we are the brethren of apes, presents us with the portraits of a pair of our simian ancestors—*Pithecanthropus alatus* is their sounding name—in whom all the various problems attaching to the question have been lightly brushed away by the facile pencil of the draughtsman. We find the naked back, the opposable thumb, the just proportion of limbs, the erect posture, and other features, the genesis of which has been such a puzzle, all united in this aspiring pair. The female has even lost all hair on the face, while stubbly whiskers and moustachios sufficiently mark the male as the remote ancestor of Lord Dundreary. Mr. Clodd, however, omits to tell us that not only have no traces of such creatures been discovered, but that no indications are afforded by the monkeys, living or extinct, with which we are acquainted, furnishing evidence of any tendency towards so remarkable a type.

What Mr. Grant Allen has to tell of flowers is not exactly new to us, for he has related the same story in all the many volumes which he has produced on the subject. He, likewise, is perfectly sure that he knows all about every process through which the present condition of things has come to be, but we cannot say that we think him equally fortunate in his descriptions of them as they actually are. He repeats, for example, what we can only call his preposterous account of the method in which the cuckoo-pint, or common arum, employs flies for its fertilization: how these creep into its spathe in search of a sweet liquor there distilled: how they cannot creep out again because of the "lobster pot" hairs which guard the entrance: how, to console themselves for their captivity, they "roll and revel" in the flood of sweet juices provided: how they get dusted over with pollen, and when the blossom withers and the obstructive hairs shrivel up, make their escape to fertilize another arum. This pretty history is as purely an imaginative product as the portrait of Pithecanthropus himself. Anyone who, next May, will take the trouble to gather an arum and hold it upside down will find that the flies inside tumble out quite irrespective of the hairs, and if the blossom be an old one he will find that the insects are dead and half-digested by their carnivorous entertainer.

In a word, we cannot understand what useful purpose is to be served by such books. Readers are, on the one hand, beguiled into believing that we know much which is utterly unknown, and, on the other hand, they are taught, instead of using their eyes to find out how Nature acts, to sketch out a mode of procedure, which, if she were "scientific," she should have followed.

J. G.

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* *The Story of Primitive Man*, by Edward Clodd, 198 pp.; *The Story of the Plants*, by Grant Allen, 232 pp. (London: George Newnes, 1895. Price 1s. each.)

AQUATIC INSECTS.*

THIS prettily got up little book is intended to induce residents in the country with a taste for Natural History to turn their attention to the investigation of the structure and habits of the numerous and interesting insects which inhabit our ponds and rivers in one or more stages of their existence. It consists of a general introduction, and of a series of life histories of selected species, partly taken from the works of previous writers, chiefly Swammerdam, Réaumur and De Geer, and partly from the original observations of the author, and of one or two friends. The book concludes with chapters on the "Insects of the Sea-shore," and on the "Contrivances of Aquatic Insects."

We welcome the appearance of works of this class as more suitable to guide the taste of young people in the direction of Natural History than more advanced books; but although Professor Miall indicates his personal preference for practical rather than systematic work, we think that very good work would be done by any naturalist who would give us a *Manual of British Fresh-water Zoology*, corresponding to Gosse's *Manual of Marine Zoology* (though a little more elaborate), which gave such an impetus to shore collecting at the time of its appearance.

There are a few points connected with Professor Miall's book to which we should call attention in case of a new edition being required. Although various marine insects exist, yet they are few, indeed, compared with those which inhabit fresh water, their place being taken by Crustacea, which are poorly represented in fresh water; and we must certainly demur to Professor Miall's statement (p. 328) that "the ancients cared little for any insect, except the bee," &c. What of the scarabæus, the butterfly, and the cicada? Larger animals, of course, engrossed more attention, but considering the fragmentary character of ancient literature, we probably find at least as large a number of references to them as we might expect to find in a similar haphazard collection of books and extracts of the present day.

There are also two omissions to which we should like to draw attention. The chapter on "Aquatic Diptera" is the longest in the book, but we find no mention of one very curious fly, *Atherix ibis*, the females of which settle on a branch overhanging the water, and then lay their eggs and die, till a great ball of dead flies and eggs is formed, as large as a child's head. When the grubs hatch they drop into the water beneath, where they undergo their transformations. And in the chapter on "Dragon-flies" we find no mention of Rœsel, the old miniature painter of Nuremberg, whose beautifully illustrated work, published about the middle of the last century, included one of the best accounts of European dragon-fly larvæ previous to the appearance of Mr. Nunney's recent papers in *Science Gossip*. Rœsel's work appears to us quite as worthy of recognition by modern writers as those of Swammerdam, Réaumur and De Geer.

Mr. Hammond's name is a sufficient guarantee for the excellence of the numerous woodcuts illustrating Professor Miall's work.

W. F. K.

Filial Affection in a Pig.—A pig is not altogether an unselfish animal, but I must record a pleasing trait in the character of a young sow, now the mother of a numerous family, towards her own mother—since deceased—in the autumn of last year. The two sows fed in a meadow divided from the fruit garden by a wire fence, rather dilapidated; there were holes in it, through which the younger and smaller animal could creep, but not sufficiently large to enable the mother to do so likewise. My gardeners informed me that they saw the young one *repeatedly* pass through the fence and return with an apple or pear in her mouth, which she laid at the feet of her respected mother.

Nascott. GEORGE ROOPER.

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* *The Natural History of Aquatic Insects*, by Professor L. C. Miall, F.R.S., with illustrations by A. R. Hammond, F.L.S. (London: Macmillan & Co., 1895, pp. ix., 395. Price 5s.)

SELBORNIANA.

Work at Barmouth.—The Barmouth Branch of the Selborne Society is bestirring itself to protect the beautiful scenery of the district from depredation and defacement. In a paper read on April 4 it was suggested that an appeal should be made to visitors to refrain from exterminating flowers and ferns, and from destroying the beauty of various spots with picnic fragments. The committee have carried out the suggestion, and cards have been printed and distributed to all the lodging houses and hotels in the district. A joint committee of members of the District Council and Selbornians are now enquiring into the question of public foothpaths on the hills.

D. Arthur Hughes.

A Useful Hint.—I think the Selborne Society should give greater prominence to the fact that the protection of beautiful places from disfigurement by litter, &c., is included in their programme. When last in town several persons remarked to me that they had not known that such a function was undertaken by the Selborne Society. Especially in watering and sea-side places the Selborne Society might often act with greater vigour, and exercise greater vigilance. Would it be any advantage to have a special branch of the Society devoted to this purpose? At least, I hope, the subject will not be overlooked. At the Conversazione held in May last, throughout many interesting speeches, the duty of Selbornians to protect beautiful places from this commonest form of spoliation was not once referred to.

Blanche Atkinson.

NATURAL HISTORY NOTES AND QUERIES.

A Cuckoo caught in its own Trap.—One day about the middle of June I saw a cuckoo in our garden apparently flying from an ivy-covered wall, which has been for years a favourite nesting-place of the pied wagtail. The wagtail's nest not unfrequently contains a cuckoo's egg, and I have found it myself on four occasions with this addition to the usual clutch. When I saw the cuckoo there did not happen to be any nest in the ivy ready for the reception of its egg, but I chanced to have by me a greenfinch's nest with five fresh eggs, so I placed this nest with three of the eggs in the ivy, some eight or nine feet from the ground to see if it would attract the cuckoo. On visiting it a day or two later I found two of the eggs were gone, one of which lay broken on the ground below; shortly afterwards the last egg had disappeared, and in its place there was left the unmistakable egg of a cuckoo, which is now in our collection. My brother, who suggested the experiment to me, tells me it has been successfully tried abroad, but I am not aware that an instance of the cuckoo being thus beguiled has been recorded in this country before. In addition to this egg, our collection contains the egg of the cuckoo from the nests of the robin, hedge-sparrow, pied wagtail, whitethroat, sedge warbler, reed warbler, meadow pipet, linnet, greenfinch, bullfinch, and yellow bunting, and some young friends have found it in their parish in the nests of the willow warbler, and red-backed shrike, but the interest of the latter egg is lessened by the fact that it was unaccompanied by any eggs of the foster-parents.

Tostock Rectory, West Suffolk. Julian G. Tuck.

The Wild Turtle-Dove.—Our garden is visited daily by wild turtle-doves, which are attracted by the maize and peas put down for the tame pigeons, and the small stones necessary for the digestion of their food which they find abundantly in the gravel. We hear their peculiar "purring" note very early in the morning, and they become very tame, so much so that I have seen one feeding within a few yards of a party of croquêt players. Few birds are more beautiful or more graceful, alike in repose on a tree, or in motion on the ground, but

perhaps they are seen to the best advantage on the wing, when the clearly defined white tips to the tail feathers are very conspicuous. It is too late to try to attract them to a new place this season, as about the beginning of August they go away to the fields, but a pint or so of white peas and a handful of salt thrown down on the gravel will almost certainly decoy them into a garden. I have not the least doubt that the same birds come back to us here year after year.

Tostock Rectory, West Suffolk. JULIAN G. TUCK.

A Wren in a Passion.—I saw a wren in a passion one evening on the occasion of her bringing out her young brood; my cat was walking on the grass plot, and the wren sat on a low bough of an apple tree, scolding with all her might, her tail spread out like a fan. I observe that the cat ignores the bird which scolds at her. E. PRICE SAYER.

Romance in Swan-life.—These birds are objects of peculiar habits. For several years I have been interested in observing their amours, and the uniform constancy to each other, when once a pair has pledged their troth. This summer a new phase of their character was noticed. In the spring we had three couples who formed an attachment for each other, each betaking themselves to separate lakes in the public park. All went well with two pairs for the season; not so with the third. After spending weeks in love-making in their fashion, and getting even so far advanced in their intended cares of family life as to partly build their nest, one morning as I passed from the Observatory I noticed a few feathers on the lake side, but the swans were not to be seen. Later in the day I found the female on the lake at the extreme west end, and the male on the one at the extreme south-east boundary of the park. The cause of this sudden "breach of promise" I am unable to explain. None of their neighbour swans have supplied any slander; their continued enforced separation from each other avoids any renewal of the bother of that unhappy night, and altogether they seem to have a nobler idea of life than to bring their folly into the law-courts!

Bolton Museum. W. W. MIDGLEY.

TO CORRESPONDENTS.

E. D. S.—Please read Rule 5. Your non-compliance therewith has necessitated three addresses where one would have served.

M. P.—The plant is *Veronica scutellata*. White varieties of gentian are not very uncommon. Read Rule 3.

R. F. S.—If your bookseller cannot get NATURE NOTES before the 19th of the month, or even later, you had better complain to the publisher, as the Magazine is always out in good time.

A Lover of the Country.—Write to Mr. R. M. Wattson, 14, Narford Road, Upper Clapton. Read our Rule 5.

WE must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c. The Editor cannot undertake to reply privately to questions.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

SELBORNE SOCIETY NOTICES.

Donations to Magazine and Leaflet Fund.—The Council acknowledges with many thanks the receipt of the following donations:—Miss C. B. Marshall 5s., North Somerset Branch 7s. 6d., Mrs. Sturge 2s., Mrs. Turle 3s. 6d.

Bibliography of Gilbert White.—Any member who may happen to possess the third and fifth editions of *Selborne*, with Capt. Thomas Brown's notes, is requested kindly to communicate with Mr. Martin at the offices of the Society.

Field Club Saturday Rambles.—

September 7.—To meet at Box Hill Station 3.31 p.m. for ramble over Box Hill (Victoria 2.14, London Bridge 2.18). Guide, Mr. T. A. Dymes.

September 14.—To meet at Chingford 3.8 p.m. (Liverpool Street 2.32, Clapton 2.48), thence over fields to Chigwell. Tea at King's Head. Day return tickets: Liverpool Street 1s., Clapton 8d.

September 21.—To meet at Hounslow and Whitton Station 3.6 p.m., thence to Whitton Park, and Gravel Pits if time. (Waterloo 2.30, Kew Bridge 2.57.) Return fare Waterloo 1s. 6d. Guide, Mr. Field.

September 28.—To meet at Bruce Grove Station (G.E.R.) 2.40 p.m. (Liverpool Street 2.17), thence *via* Tottenham Church to Southgate by field paths. Tea at Cherry Tree, Southgate, 5.30. Returning to Winchmore Hill Station (G.N.R.) *via* Winchmore Hill Wood.

October 5.—Fungus Foray. To meet at Wood Street Station (Walthamstow) 3 p.m. (Liverpool Street 2.34, Clapton 2.45), thence *via* St. Peter's Church and Waterworks, through forest to Chingford. Tea at Forest Hotel about 5 p.m. Guide, Mr. F. W. Hildyard. Day return ticket to Chingford—Liverpool Street 1s., Clapton 8d. Members who wish to identify specimens and consult authorities on fungi are invited by Mr. Hildyard, after the foray, to the Shuttleworth Club, Fye Foot Lane, Queen Victoria Street.

Council and Committee Meetings.—At the Council Meeting on Aug. 6, a resolution was passed by which the Hon. Secretary of the Field Club Committee will henceforward be, *ex-officio*, a member of the Magazine and Leaflet Committee. The Council will meet on September 3, and October 1, at 5.30 p.m.; the Magazine and Leaflet Committee on September 18, and October 16, at 5.30 p.m.; the Finance Committee on September 18, and October 16, at 6.30 p.m.

NEWS FROM THE BRANCHES.

Abinger and Shere.—Miss L. M. Forster, the Hon. Secretary, has issued a circular letter inviting those resident in the neighbourhood to interest themselves in the recently formed branch. Ladies and gentlemen who reside in Shere, Peaslake, Holmbury, or Abinger, and who wish to become members, are requested to communicate with the Hon. Secretary, at West Hackhurst, Abinger, Dorking.

Croydon.—The Council hears with pleasure that a movement is on foot with a view to action being taken by the Croydon County Council, in conjunction with other county authorities, for the inclusion in the schedule under the Wild Birds' Protection Act, 1894, of certain birds that require protection.

New Branches.—The formation of new branches is in contemplation at Glasgow and Great Kimble.

Nature Notes:
The Selborne Society's Magazine.

No. 70. OCTOBER, 1895. Vol. VI.

A PET HARE.

IT is seldom one meets with anything so pleasant at a dentist's as Nature Notes. However, it was my good fortune to do so the other day. Needless to say, I went straight from that abode of torture to a book-shop, and ordered Nature Notes for the year.

After perusing some of the numbers, the idea occurred to me, that some of its readers might be interested on hearing about my hare "Poppet." He was sent to me from Norfolk on May 18, 1894, and was so tiny I used to carry him about in one hand, he getting very tame in a few days. When he first came I never thought he would live long, as the only place of residence I had to offer him was a packing case in a sunless, smutty, brick and mortar London area, and there was the fear of cats besides dining off him any night they felt inclined, but I managed to make him a temporary "cat-proof" dwelling with wire netting, and Poppet still lives, and has grown into a fine hare.

Once, the beginning of the winter, we thought he would die, but fortunately discovered in time he had had no oats for a day or two, and was consequently so offended he would eat nothing; he recovered at once when he had oats, and has never been ill since, although he lived out at night all the intensely cold weather, and never seemed the worse for it. From what I have read, I gather hare temper is not of the best; I therefore think Poppet is better than most in this respect. Although his temper is far from perfect, he never bites, only "swearing" like a cat, and looking sulky. Of his great hind legs and feet he is very proud, also his ears, on both of which he bestows great pains

when he performs his ablutions, an operation continually taking place, as he keeps himself even cleaner than a cat, whom he much resembles when washing, only using his fore feet in a much more hand-like manner than they do, sitting up and washing his face with both feet at once; I have sometimes noticed him draw his long moustaches between his "hands" with great care to clean them, and when he is eating bread, and a crumb is escaping from his mouth, he puts a "hand" up in quite a human manner, and pushes it back.

His idea of bliss is to sit with us after dinner until ten o'clock. He has a great idea of time, and is generally waiting for the door of the hutch to be opened, when he jumps out, and after inspecting everything of interest in the kitchen region of the house, bounds up three flights of stairs, four or six steps at a time, into the drawing-room, where, after investigating all his acquaintances in the shape of chair and table legs, he begins his gambols, which consist of tearing about at top speed, and doubling all across the rooms in a marvellous manner, never running into anything; he finishes with leaps and bounds, and then comes for bread, of which he is very fond. He is much interested in his own reflection, continually jumping on a chair to look in a looking-glass, and then looking about with a puzzled expression for an imaginary hare, the non-appearance of which is the insolvable problem of his life.

In his cage he lives on oats, bran, and cabbage leaves, and has a remarkably large appetite; for a treat he has bread, apples, cherries, and carraway comfits; the last is a peculiar taste, as he will touch nothing sweet, nor yet eat plain carraway seeds, so it must be the crunching he enjoys. He has a marked preference for white. If I happen to be wearing a white dress, he will generally jump on my knee, instead of sitting on the floor, which he usually does. After his games he lies down to rest, stretching out his great hind legs until they are as long as his body. At five minutes to ten he gets up and retires to the middle of the room, where he can see all ways, and, at the least movement on my part, is off into hiding, and then we have a regular scramble, which he seems to enjoy, until caught, when he swears and kicks, and often gets away again; he has to be carried downstairs because, his front legs being so short compared with his hind ones, he cannot manage the steps. I think he excels all animals in cunningness; if he finds a ruse answer during the catching process one night, he does not forget to do the same trick the next evening.

One curious fact about Poppet is that he never drank anything from the time he came in May until some time in January, and as I was told water was bad for rabbits, I concluded it might be so for hares, so I gave up putting it in his cage, as he never touched it. But one afternoon in the frosty weather, I found him drinking the water that had run down inside the window, so I offered him some and found he was very thirsty,

so now he always has a drink, morning and evening, but is never as thirsty when it is very hot as he is when it is cooler. I think his chief characteristics are his wonderful powers of scent and hearing, especially of *distinguishing* sounds, never noticing any noise going on in the street, however loud (always excepting organs, when his attention is riveted), but at a footfall, or door closing in the house, he is on the alert at once; he is also intensely inquisitive, recognizing anything as new in a room directly he enters, and smelling it over and over, until quite satisfied he will know it again anywhere.

M. L. Goodacre.

FOUR BIRD BOOKS.

THAT particular school of field-ornithologists which has been, if not founded, at all events fostered by Mr. Fowler's *A Year with the Birds*, will welcome Mr. Parkhurst's diary* of a year's observations made in Central Park, New York City (with few exceptions, in the small section of it known as "The Ramble," covering about only one-sixteenth of a square mile), and will perhaps be surprised at the number of species he has been able to see in this limited area. It seems really as though a locality of so public a character as a city park, so far from being shunned by the birds, finds especial favour with certain species. After advocating in the prelude the claims to attention of field ornithology, and treating of the subject generally, the months and their birds are dealt with in succession. In these chapters we are introduced to nearly a hundred species of birds, chiefly migrants, it is true, and only seen while on passage, for the actual residents in the "Ramble" are few in number. But this fact, perhaps, constituted one of the greatest charms in this year of observations, for during the migration season the novice knows not what a morning may bring forth, while the experienced observer looks anxiously for the arrival of old acquaintances, and knows the time of their coming. The author has interwoven with the narrative the discussion of all the prominent aspects of bird life that pertain to field ornithology, and has thus produced a most readable book, for though his manner of introducing us to the birds is sometimes a little fanciful, it is always pleasing. North American birds always interest us, they are so like our own. We read here of thrushes, titmice, swallows, finches, kingfishers and woodpeckers;

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* *The Birds' Calendar*, by H. E. Parkhurst, pp. viii., 351. (London: John C. Nimmo, 1895.)

but the reader must remember that Nearctic "warblers" are not true warblers, as we use the word. This fact must be borne in mind while perusing Mr. Parkhurst's remarks on the colours and habits of this group. The addition of the scientific names would have been a great improvement. It is not every English reader who knows that the American "robin" is a kind of thrush (it seems to resemble our blackbird in the habit of singing after a dripping summer shower), or that their "white-throat" is a song sparrow. And though our author tells us in one place that the "flicker" is the golden-winged woodpecker (a bird possessed of twelve other names!) the reader often finds himself at a loss to know the natural affinities of the birds whose names he encounters, and a reference to the grouped list in the "Postlude" does not always extricate him from his difficulty. We can cordially recommend this work to our readers. It is well calculated to make one "catch the fever" which never again leaves the field-ornithologist; and those who caught it long ago, or were born with it, will find a genuine delight in reading this author's record, and some food for reflection in the pleasing discourses with which the narrative is interwoven. The plates are apparently reproductions of photographs of mounted groups of stuffed birds. This kind of illustration is seldom, if ever, satisfactory, and in this instance comes as a little surprise after reading the author's remarks about "beady-eyed, cotton-stuffed, and wire-mounted mummies," &c.

In his *Chapter on Birds*,* Dr. Sharpe gives us an account of the life history of eighteen species of rare avian visitors to this country, drawing largely upon the writings of naturalists who have met with these species in life. Moreover, he has striven to give this little work a wider scope by saying "a few words on the natural relations of the species, so as to give a little general information on the families to which they belong." The result is a book containing, for its size, perhaps more useful and interesting information on British birds than any other. Dr. Sharpe's generic and specific names are often so strange and new to some of us, that it is with some trepidation we suggest that a slip has really been made on page 74! The plates are executed in Mr. Keulemans' best style, and have lost less than might have been feared in their reproduction in chromo-lithography.

We have previously noticed at some length the two first volumes of the "Fur and Feather Series," edited by Mr. Alfred E. T. Watson, and with regard to the third—treating of the pheasant†—which has reached us, it is necessary to say little more

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* *A Chapter on Birds*, by R. Bowdler Sharpe, LL.D., F.L.S. &c. (Zoological Department, British Museum). Rare British Visitors. Pp. ix. 124, 18 coloured plates. (London: Society for Promoting Christian Knowledge, 1895. Price 3s. 6d.)

† "Fur and Feather Series:" *The Pheasant*. "Natural History," by the Rev. H. A. Macpherson; "Shooting," by A. J. Stuart-Wortley; "Cookery," by Alexander Innes Shand, pp. viii., 265, 10 plates, vignette and diagrams. (London: Longmans, Green & Co., 1895, 5s.)

than that it is carried out upon the same lines as the others, and shows the same excellence of work. But the pheasant has a less natural history than either the partridge or the grouse, and even in the wildest state in which it exists in England, its habits afford but little food for observation. The book opens with a most interesting and instructive chapter on the history, ancient and modern, of the pheasant, after which the habits of the wild bird are treated of, and there are chapters on the abnormal varieties and the hybrids not uncommonly met with, as well as upon ancient and modern fowling and poaching. In the former of these last we find quaint extracts from the works of Markham and other less known authors. In the chapter on habits Mr. Macpherson quotes a Russian correspondent, Mr. Djanaschvili, who describes the eggs of the pheasant as whitish, speckled with greenish yellow spots. This is curious; but as his experience receives independent confirmation from another Russian gentleman, it may possibly prove to be a peculiarity of the birds of those parts. But when, a few pages further on, we find Mr. Djanaschvili describing the chicks as almost entirely covered with a delicate yellowish down, which in time turns greyish brown, we think his words are either inaccurate or insufficient, according to our ideas of the colours of the young pheasant; nor can we regard his statement that the yellowish colour of the chicks' down is almost the same shade as that of the golden corn fields as otherwise than fanciful. In England, at all events, pheasant chicks have lost their down by the time the corn has turned colour. No field naturalist should fail to read the instructive and well-written "shooting" portion of the volume, and in the "cooking" portion we are told, among other things, in what parts of the world the best flavoured pheasants are found. The eleven illustrations by Mr. A. Thorburn, suggested and revised by Mr. Stuart-Wortley, leave little to be desired, except it be a plate of the "old-fashioned" pure-bred *P. colchicus*, which naturalists and sportsmen alike would have been glad to have in this charming monograph.

Mr. Headley's ornithological work* is of so comprehensive a nature that it would be impossible, within the narrow limits available for the purpose, to review in detail the very wide field which he has so ably covered. In the opening words of his preface he tells us that the aim of his book is an ambitious one. It deals with the development of birds from reptilian ancestors, their physiology, and their flight; with their colours, song, instinct, reason and migration. It goes into the principles of classification, and gives some hints as to the best methods of studying birds. A more useful book to the ornithologist, we take

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* *The Structure and Life of Birds*, by F. W. Headley, M.A., F.Z.S., Assistant Master at Haileybury College, pp. xx., 412, 78 illustrations. (London: Macmillan & Co., 1895, 7s. 6d.)

leave to say, has seldom been produced; for it deals with the anatomical and physiological department of ornithology as well as with those subjects which chiefly interest the field naturalist. It sums up the works of specialists in all the branches of the subject, which, as the author truly remarks, "are often over-elaborate for those to whom ornithology is not the main business of life." Many a hedgerow naturalist into whose hands this book falls will owe a debt of gratitude to the author, whose careful and laborious digest has enabled him in these busy times to assimilate in a convenient and agreeable form the main prin-

ciples of what may be termed by some people the higher branches of ornithological science. For the benefit of those who wish to go more deeply into any of the subjects, the author has given at the end of each chapter a list of some of the best books dealing therewith. He has a good word for the Society for the Protection of Birds, and closes his volume with an instructive chapter on "outdoor and indoor ornithology." The illustrations are useful and to the point. By the kind permission of the publishers we are enabled to reproduce one.

O. V. Aplin.

A BOOK OF BEASTS.

AMONG the many *Bestiarii*, or Books of Beasts, so popular in the Middle Ages, not the least was the *Libro delle Bestie*, done into the vulgar tongue of Italy by Bono Giamboni from the original French of Brunetto Latini, and now accessible to readers of Italian for the modest sum of four soldi.*

To students of Dante, the name of Brunetto Latini will recall one of the most pathetic scenes in the Divine Comedy. Passing along the dyke in the seventh circle of hell, Dante feels his garment plucked, and, turning aside, recognizes on the burning sand below, in the pitiless, eternal, flaming rain, the dear and kind paternal image of his former master, him who in the world above had taught how a man might immortalize his name. Then the long colloquy and the parting admonition: "Let my *Tesoro* be commended to thee, wherein I still live." Alas for the vanity of human ambition! none but the curious now reads this "Treasure," in which was summarized in ponderous tome the knowledge of the age. "*Nel qual io vivo ancora.*" No, not in the *Livres du Tresor* does Ser Brunetto now live, but rather crouches, a shame-stricken figure branded for all time with infamous sin, against the lurid background of Dante's Inferno.

When a professor in the Middle Ages wished to make a book on Natural History, he did not ask the Government to send him to Africa or other of the four quarters of the earth. He withdrew to his closet, and from his own unchastened imagination and the study of many folios, evolved something which, if not scientifically accurate, was certainly entertaining. Those were uncritical but picturesque times. The world had not been surveyed from China to Peru. Men lent an eager ear to travellers' wondrous stories of

> Antres vast and deserts idle,
> Rough quarries, rocks and hills whose heads touch heaven;
> The anthropophagi and men whose heads
> Do grow beneath their shoulders.

Latini's classification would scarcely commend itself to a South Kensington examiner. His divisions are four: fishes, serpents, birds, mammals. Classed with the latter we are not a little startled to see chameleons and unicorns. Nor are we reassured when we find bees put with the birds, and basilisks and dragons with the serpents. We are positively shocked to meet with oysters, crabs, whales, crocodiles and sirens among the fishes. Latini is very fond of this classification into fours. He divides the universe into four elements: earth, air, fire, and water, which have four qualities: the earth is cold and dry;

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* Biblioteca Diamante, No. 13, 20 centesimi.

the air, cold and wet; fire, hot and dry; water, cold and wet. Similarly, men and beasts have four humours: anger, which is hot and dry; flegm, which is cold and wet; blood, which is hot and wet; melancholy, which is cold and dry.

But let us return to our beasts, and be it remembered that we are reading from a treatise written by one of the foremost teachers of his age, the master in the Natural Sciences of no less a genius than Dante, one whose portrait was thought by Giotto worthy to figure side by side with the divine poet himself on the frescoed chapel walls in the palace of the Chief Magistrate of Florence.

The crocodile is an animal with four feet and yellow in colour. It liveth in the river Nile, the river which floweth through the land of Egypt. It is twenty feet in length and armed with great teeth and claws; and know that it hath no tongue. This is the only animal in the world that moveth the upper jaw; the lower being fixed. And if it see a man it straightway layeth hold of him and eateth him up and then doth weep for him. Now when a bird named sconfilions desireth carrion it goeth to the crocodile and placeth itself near its mouth and so gently doth tickle its throat that it openeth its jaws. Then cometh another animal named calcatrix and entereth into its body and issueth forth at the other end, tearing through in such manner that the crocodile dieth thereof. And in that land there dwell men of small stature but so daring that they hunt the crocodile, which, when it once is captured, loseth all its ferocity, and becometh so gentle that its master may ride it and make it do whatsoever he will.

The whale is the fish that received Jonah into its belly, even as the Old Testament telleth, and it seemed to him that he did descend into the jaws of hell, so great was the opening thereof. Now this fish riseth so high out of the water that its back appeareth above all the waves of the sea, and the wind bloweth sand thereon and plants do grow, so that many times mariners are deceived, and believing it to be an island, descend thereon and fix stakes into the sand to cook their food. And when the whale feeleth the stakes and the fire it moveth uneasily away, so that they who be thereon are in evil plight and oft do perish. Now when the whale desireth to eat, it lieth still with its jaws wide agape, and a certain fish goeth forth and gathereth to itself other fishes and leadeth them into the whale's mouth (for these foolish fish believe the open jaws of the whale to be two great rocks) and when they are led within, the decoy fish escapeth, and the whale swalloweth its meal.

The section on fishes is closed with an elaborate description of the siren. The master then proceeds to speak of serpents, which in many respects are most akin to fishes. We learn that when serpents grow old their eyes become dim, whereupon they starve themselves until their skins become loose, and then drag themselves between two stones and tear off their old skins; so they again become young and healthy. They then eat of the herb fennel and regain their clearness of vision. When they go to drink they always deposit their poison in a safe place. The asp bears in its head a precious jewel, and when the magician wants this jewel (a carbuncle) he utters a spell which if the asp hear, it immediately fixes one ear on the ground and stops up the other with its tail.

After detailed descriptions of dragons, basilisks, and other strange creatures, we arrive at the birds, among which are classed bees.

These do build them separate houses and chambers where each hath its own name and place. And know that of all the animals in the world bees alone do possess all things in common. The work of all is common to all; all stores of fruit and all the young are common to all. They organise their people into communes. They elect their king—not by lot, but rather he who is most gentle in his manners, and most beautiful and vigorous in body, and of the most virtuous life, he is chosen king and lord over all. And though he be king, yet is he the more humble and of greater goodness and piety; even his sting he useth not unjustly. Though he be placed over all, yet his subjects do enjoy full freedom of action and of will, since their goodwill is such that all live together in love and concord, and none issueth from his house or chamber until his lord be departed, who leadeth his people whither he will.

I cannot help thinking that this idyllic picture of a free community living together in mutual trust and goodwill under the rule of a just king was written by Latini *à l'adresse* of the tyrants of his day—the Eccelini, the Obizzi, bloody and lawless oppressors, veritable scourges to the land of Italy—whom Dante saw in hell, immersed to their eyes, with Attila and Alexander, in the deepest part of the river of boiling blood.

The following is an early and curious example, with tragic results, of the experimental method as applied to natural history.

The Archbishop of Milan once put a crow's egg in a stork's nest. When the egg was hatched the male brought thither a number of female storks, who, when they saw the young bird so unlike their kind, straightway fell upon the mother bird and ignominiously slew her.

The section on birds is a long one, and ends with the common or garden fowl.

By the song of the cock we may know the hour of the night, and even as the cock, before it sings, beateth its body with its wings, so should a man before he prays flagellate himself, since none is without sin.* The housewife that wisheth to have good broods of chicks must tell her servants to lay down the eggs at the crescent moon and in odd numbers.

After this ingenious piece of domestic economy the master proceeds to treat of the beasts (mammals).

The lion, king of beasts, is of great strength and courage, and loveth man, and when he is most angry and fullest of evil will towards a man, the more quickly doth he pardon him if he throw himself on the ground and ask for mercy. The lion sleepeth with his eyes open, and traileth his tail over his footprints, when he goeth forth for food.

The elephant never goeth aboard ship until the master thereof have promised to bring it back to the same country whence it started. If an elephant lie down

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[* This idea is expressed in the quaint poem on the cock, perhaps of the end of the fourteenth century, of which Dr. Neale, in his *Mediæval Hymns and Sequences*, gives a charming translation. Here is the verse referred to:—

"Cock at midnight croweth loud,
And in this delighteth;
But, before he crows, his sides
With his wings he smiteth:
So the priest at midnight, when
Him from rest he raiseth,
Firstly doeth penitence,
After that he praiseth."

ED. *N. N.*]

it cannot rise again because it hath no knees or other joints in its legs. When the female hath lost her mate she never taketh another, but wandereth alone through the forest all the rest of her days.

In conclusion, here is an appalling beast which inhabited India.

The manticora* is a beast that liveth in India. It hath the face of a man and is of the colour of blood. It hath yellow eyes, the body of a lion, the tail of a scorpion, and it runneth so swiftly that no creature may escape it, but above all things it lusteth after the flesh of man. And know that it hath four legs above and four below, and sometimes it runneth with those above and at others with those below, and so using them alternately as it pleaseth it never groweth weary however far it may run.

It is difficult to imagine what became of the four legs not in use—whether the beast sailed along with them erect, one at each corner, somewhat after the fashion of an animated four-post bedstead, or whether they were neatly folded upon its back. What, too, became of the head when the creature ran wrong side up? Presumably it worked on a swivel. But these are mere details.

Such are a few specimens from this strange menagerie of beasts. Space forbids further examples, but enough has been given to demonstrate how much more exciting and edifying was Natural History as was taught by Latini, than as now expounded by the zoologists of more matter-of-fact days.

T. Okey.

THE FALLS OF FOYERS.

SINCE we wrote our article in the September number, further interest has been excited in the Falls of Foyers. The *National Trust* has issued a memorial which puts the case strongly but temperately, and Mr. Ruskin has said that he "has no words strong enough to express what he feels at such an iniquity, and is in great sympathy with any steps taken to prevent it."

Canon Rawnsley, too late for our September issue, sent us the following sonnet, which has since appeared elsewhere, but which we think our readers will be glad to see in Nature Notes:—

Must Foyers fail, its thunders sound no more,
Its bright rememberable rainbows fade?
Shall here be waterless ruin, silent shade,
While these adventurers to their pocket pour
Profit, with loss for all our nation's store
Of song, and filch the lightning to their aid,
Yea, by deep wrong to Nature, ply their trade,
And banish Love from off this blighted shore?

* A pictorial representation of this awful monster in a book was the cause of unspeakable terror to the youthful Leigh Hunt. See *The Life of Leigh Hunt*, by Cosmo Monkhouse.

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Nay, by the mountains that have given us men,
By free far-echoing waters that make bold
Our hearts to high endeavour, let us stand
Firm for the beauty of our native land,
Not wail like ghosts in some fume-blasted glen,
But drive the tyrant hence, yea, even with gold!

The Council of the Selborne Society has purchased from Messrs. Valentine & Co., of Dundee, the right to reproduce their photograph of the principal Fall, which we are glad to place before our readers. The *National Trust* memorial includes the following lines of Burns:—

"Among the heathy hills and ragged woods,
The roaring Foyers pours his mossy floods,
Till, full, he dashes on the rocky mounds,
Where, through a shapeless breach, his stream resounds.
As high in air the bursting torrents flow,
As deep recoiling surges foam below,
Prone down the rock the whitening sheet descends,
And viewless Echo's ear, astonished, rends.
Dim seen through rising mists and ceaseless showers,
The hoary cavern, wide surrounding, lowers;
Still through the gap the struggling river toils,
And still, below, the horrid caldron boils."

"The pool and the whole rent of the mountains," said Coleridge to Southey in one of his recently published letters, "is truly magnificent."

JEFFERIES AND THOREAU.*

It is long since we took into our hands so dainty a volume as that in which Messrs. Longmans have produced these thoughts from the writings of Richard Jefferies. Messrs. Constable are well known as printers of beautiful books, and here we have on hand-made paper, at a price which puts it within the reach of all, a charming example of their work. The binding is worthy of the type. Even those who are familiar with Richard Jefferies' books will be glad to become possessed of this anthology, gathered from some of them with loving and appreciative care by Mr. Waylen. Like the wayside flowers so many of them commemorate, they may be overlooked among the wealth of observation and description which fills every page of Jefferies' volumes; and some will assuredly be new to most readers. The temptation to quote two or three of these is irresistible, and we shall thus be doing more than by any words of our own to recommend this delightful book.

Here, from one of his less known books, is a charming passage on wild flowers: "Wild flowers alone never become commonplace. The white wood-sorrel at the foot of the oak, the violet in the hedge of the vale, the thyme on the wind-swept downs; they were as fresh this year as last, as dear to-day as twenty

* *Thoughts from the Writings of Richard Jefferies.* Selected by H. S. H. Waylen. (London: Longmans. 3s. 6d.)
Selections from Thoreau. Edited with an Introduction by Henry S. Salt. (London: Macmillan & Co. 3s. 6d.)

years since, even dearer, for they grow now, as it were, in the earth we have made for them of our hopes, our prayers, our emotions, our thoughts."

Here is another picture: "The sweet violets bloom afresh every spring on the mounds, the cowslips come, and the happy note of the cuckoo, the wild rose of midsummer, and the golden wheat of August. It is the same beautiful old country always new. Neither the iron engine nor the wooden plough alter it one iota, and the love of it rises as constantly in our hearts as the coming of the leaves."

The pathetic personal note comes in here: "Give me the old road, the same flowers—they were only stitchwort—the old succession of days and garland, ever weaving into it fresh wild flowers from far and near. Fetch them from distant mountains, discover them on decaying walls, in unsuspected corners; though never seen before, still they are the same: there has been a place in the heart waiting for them."

Here we have that sympathy with the poor which is so frequently expressed by Jefferies: "Nature would go on though under the thumb of the north wind. Poor folk come out of the towns to gather ivy-leaves for sale in the streets to make button-holes. Many people think the ivy-leaf has a pleasant shape; it was used of old time among the Greeks and Romans to decorate the person at joyous festivals. The ivy is frequently mentioned in the classic poets. Not so with the countrywoman in the villages to-day—ground down in constant dread of the hateful workhouse system, of which I can find no words to express my detestation. They tell their daughters never to put ivy-leaves in their hair or brooch, because 'they puts it on the dead paupers in the unions, and the lunatics in the 'sylums.' Such an association took away all the beauty of the ivy-leaf. There is nature in their hearts, you see, although they are under the polar draught of poverty."

Those who are interested in knowing the favourite flowers of their favourite authors will be justified in concluding that the bird's-foot trefoil was the one selected by Jefferies. In three passages at least in this little volume he sounds its praises. "The bird's-foot lotus," he says, "is the picture to me of sunshine and summer, and of that summer in the heart which is known only in youth, and then not alone. No words could write that feeling; the bird's-foot lotus writes it." And again: "Here by me is a praying-rug, just wide enough to kneel on, of the richest gold inwoven with crimson. All the Sultans of the East never had such beauty as that to kneel on. It is, indeed, too beautiful to kneel on, for the life in these golden flowers must not be broken down even for that purpose. They must not be defaced, not a stem bent: it is more reverent not to kneel on them, for this carpet prays itself. I will sit by it and let it pray for me. It is so common, the bird's-foot lotus, it grows everywhere; yet if I purposely searched for days I should not have found a plot like this, so rich, so golden, so glowing with sunshine. You might pass by it in one stride, yet it is worthy to be thought of for a week and remembered for a year."

Henry David Thoreau was the subject of an appreciation by Mr. J. L. Otter in NATURE NOTES for December, 1890, and selections from his works have more than once been noticed in our pages. No more attractive presentment of them has been put forth than the one now under notice, to which Mr. H. S. Salt has contributed a preface. Thoreau's intimate acquaintance with wild life has been well summed up by an admirer in the following words: "His knowledge of nature was so complete and curious that he could have told the time of the year, within a day or so, by the aspect of the plants. In his dealings with wild animals, he was the original of Hawthorne's Donatello. He pulled the woodchuck out of its hole by the tail; the hunted fox came to him for protection; wild squirrels have been seen to nestle in his waistcoat. He would thrust his arm into a pool and bring forth a bright, panting fish, lying undismayed in the palm of his hand."

Passages in abundance might be quoted from these *Selections* in support of this description, did not the limitations of space prevent us from citing them. But to those who know Thoreau these extracts need no recommendation; those who do not had better become acquainted with him through the medium of this delightful book.

SHORT NOTICES OF BOOKS.

WHATEVER just cause agriculturists may have for discontent with the recent summer, pedestrians at any rat can have little but what is good to say for it. Town folk have, during the prevalent fine weather, had ample opportunities for rambling in the country, and have doubtless taken full advantage of them. Those who prefer to be guided straight to the prettiest scenery near London, and hate wasting time in having to find it for themselves, have probably been following out the admirable walks described by Mr. Walker Miles, in his *Field-path Rambles* through West Kent and among the Surrey Hills, to which the attention of Selbornians has frequently been called in these pages. Those assiduous pedestrians who have more or less exhausted the country exploited by Mr. Miles, will have noted with pleasure the appearance of another of his little guides, introducing a fresh series of walks entitled the *Surrey Hedgerows*. This, the ninth part, *Round Croydon*, costs sixpence, and describes in a practical and lucid manner some hundred miles of delightful rambles over the hills and valleys between Shirley and Caterham on the east, and Banstead and Sutton on the west. The district is one which is easily and cheaply reached, and will fully repay the attention bestowed upon it by those who are at present unacquainted with it; and no better guide to it could be desired than that which Mr. Miles has placed in the hands of the public. There is, however, a conspicuous error in the book which has escaped revision. On pages 1 and 23 the first section of Route 2 is stated to be 9½ miles long, although as shown by the text it is really only 5½ miles.

A. G.

We have too long put off noticing Miss Isabel Fry's delightful little book *Uninitiated* (Osgood, McIlvaine & Co., 2s. 6d.), in the hope that we should be able to give it the detailed review which it merits. This has resulted in our leaving it unnoticed, a defect which we must supply, however insufficiently. There are comparatively few who, when they arrive at maturity, are able to recall the impressions of their childhood so clearly as to convey to their readers a sense of reality; but Miss Fry is one of these. We have read nothing so realistic—to employ a much abused word—since Stevenson's *Child's Garden of Verses*. It may be asked whether the book appeals in any special manner to Selbornians. Certainly it does: it abounds in passages which show the keenest appreciation of Nature—especially human nature—descriptions of trees and gardens, and evidences of affections for animals and plants. Moreover the book is charmingly got up, both in print and cover. When it runs to a second edition, Miss Fry must make one correction. "Eucomus," which figures so prominently in one of the sketches, should be "Eucomis."

Mr. H. K. Swann, in his preface to *Nature in Acadie* (London, Bale), tells us that his little book is "not intended to be in any sense a scientific work." It consists of ten pleasantly written chapters, telling us what he saw during his stay in Nova Scotia, in which the "attempts at word-picturing" do not seem to us as satisfactory as the observations of birds which are scattered through the pages. It begins with a poem, addressed to Thoreau, from which we infer that Mr. Swann would be wiser to stick to prose. The price strikes us as excessive—3s. 6d. for 82 pages!

We have more than once had the opportunity of noticing works by Mr. J. W. Tutt, who, in his *Rambles in Alpine Valleys*, gives us another of those chatty accounts of the objects in various branches of natural history—more especially entomology—which he has met with in his rambles. This time he takes us further afield, to the Italian side of the Mont Blanc range, where he had the good fortune to spend a holiday in the summer of 1894. One of the best features in Mr. Tutt's books is the admirable indexes which he supplies: so full, indeed, that the elaborate table of contents might be dispensed with.

Messrs. Macmillan & Co. send us a dainty little book, *From a New England Hillside*, by Mr. William Potts, who is evidently a follower of Mr. John Burroughs. It is a year's diary kept in a quiet country village—a diary devoted mainly to records of flowers and birds, interspersed with numerous and not too

hackneyed quotations, with pictures of scenery and quiet reflective passages, and accounts of excursions, and personal experiences. Altogether it is just the book to put into one's pocket, but not to keep there. It contains three hundred pages, costs three shillings, and as we expect in Messrs. Macmillan's books, is beautifully printed and suitably bound.

Greenhouse and Window Plants, by the late Charles Collins (Macmillan & Co., price 1s. net). This little book of 154 pages is crammed with useful information for would-be growers of greenhouse and window plants. The author wrote chiefly with a view to attract amateurs who love to grow their own plants themselves, but who probably lack the practical training and experience of the professional gardener. Under the editorship of Mr. John Wright, Mr. Collins's little book has been submitted to the public, and we feel sure that it will become popular among those for whom it is specially intended. Mr. Collins was himself a practical gardener, and knew well how to describe in concise yet clear language the various operations which must be undertaken before plants will have a fair chance of growing. Almost everything pertaining to gardening has been touched upon, from "crocking" pots to building greenhouses, while there is abundance of information as to the best kinds of plants to grow. The amateur will find lists and short descriptions of the most suitable plants for all seasons, and he may have his choice of bulbous plants, orchids, ferns, creepers, plants with ornamental foliage, &c.—in fact, plants for any purpose. He will not be burdened with long and dry botanical descriptions or technical terms, and he may accept the names given as being on the whole correct, although the orthography of some of the fern names is a trifle weak. The practical and interesting information is, however, the main thing, and we hope Mr. Collins's little book will secure as large an amount of patronage as it certainly deserves. J. W.

A Handbook to the British Mammalia, by R. Lydekker, B.A., F.R.S., V.P.G.S., &c. Pp. xiii., 339, with 32 coloured plates. (London: W. H. Allen & Co., Limited, 1855, price 6s.)

It will be readily granted that the advances which have been made since the publication of the second edition of Bell's *British Quadrupeds* in 1874—in our knowledge of the distribution, as well as the habits, of our native mammals, together with the necessary modern changes in the scientific names of some of them—fully justify the appearance of a new volume on the subject. But whether or no the appearance of the present *Handbook* is justified, will not be so clear to those who have followed the literature of the subject during the last few years. It is unfortunate that Mr. Lydekker cannot claim to be an observer of the habits of British mammals. He has been obliged to draw largely from Macgillivray's *Manual*, issued in Jardine's *Naturalists' Library*, of which the *Handbook* may be "regarded almost as a new edition." However excellent the *Manual* may have been in its day, it was, perhaps, hardly worth while to reproduce much of it, and it is more satisfactory to find that our author has availed himself of part, at all events, of the careful and extensive work which Mr. Harting has done in this department of late years. Mr. Lydekker is well known as a palæontologist, and a noticeable point in the present work is the account given of the species exterminated within the historic period, and the very interesting chapter on the ancient mammals of Britain. On the whole, while we are thankful for the present instalment, we must confess to a little feeling of disappointment in finding that we have still to wait for the complete, exhaustive, and up-to-date account of our native mammals, for which we have so long been looking. The plates, with two exceptions, are those used in the original *Naturalists' Library*, and ought never to have been reissued. They were not good in the beginning, and the present attempt to colour them has been a woeful failure. The two exceptions are by Keulemans, and are a remarkable contrast to the others.

O. V. A.

SELBORNIANA.

The following excellent letter from Mrs. Phillips, Vice-President of the Society for the Protection of Birds, appeared lately in the *Midland Free Press*:—

"Mixed Plumes.—A paragraph in a recent London paper states that 'a well-known lady was seen at the opera in a box, the other night, with an ornament in her hair that was exactly like the sort of brush servants use to clean lamp chimneys with. It stuck up to such a height that the wearer had to bend her head on entering her box, and whenever she moved it flicked the dust off the curtains and walls.' The writer has aptly described an extreme specimen of the 'mixed plumes' arranged in the form of a lamp-chimney or sweep's brush, the demand for which has renewed the persecution of the birds of paradise, which abated when the turbans of our great-grandmothers went out of fashion.

"The dorsal and other plumes of certain species of herons, known in the trade as *ospreys* or egrets, or (in French) aigrettes, are, it is well known, obtained in their full beauty only in the breeding season. It is the nuptial plumage which is torn from the parent birds, whose bodies are flung aside dead or alive, as may be, in festering heaps, while the young ones are left to starve, uttering loud and piteous cries. Extensive heronries in Florida and elsewhere have been utterly destroyed in this manner, and exact statistics have been recorded by American and other naturalists, endorsed by the high authority of Professor Newton, who has suggested that the wearers of an ornament obtained at such a murderous cost, should be tarred as well as feathered.

"In anticipation of the present season some arch-enemy of bird-life discovered that the matchless plumage of the birds of paradise included lovely tufts of long and delicate plumes, occasionally two feet in length, of intense golden yellow and pale brown, which divided, bleached, or dyed would sell for some sixpence a-piece, mix well with the ospreys, and furnish a large profit for the trade, wholesale and retail. The idea has been carried out with remarkable energy and success. The Hon. Secretary of the Society for the Protection of Birds gives an instance of one London warehouse having sold 60,000 dozen of these mixed sprays during the recent season, in fact, the use or rather cruel abuse has been so great that Mrs. Lemon states the prevailing impression in the trade to be that the supply is failing—that these comparatively rare, tropical birds are being rapidly used up. M. Jules Forest affirms, in his *Oiseaux dans la Mode*, that it is already difficult to procure perfect specimens, since none of them are allowed to live long enough to attain their full plumage, which in the case of the male bird takes several years to develop.

"The English press—town and country—including the *Times*, with its strong leader enforcing Mr. Hudson's letter regarding "Feathered Women," has for many years protested against the wasteful destruction of bird life, not perhaps quite in vain, for the stuffed carcasses commonly worn two or three seasons ago are discarded, and the plumes now worn are for the most part dyed, stiffened, and arranged almost beyond recognition. The tar brush suggested, for the wearers, seems to have been employed upon the feathers.

"Is not the wholesale slaughter of herons and birds of paradise rather a heavy price to pay for any headgear, and might not some bird-lover gain the ear and touch the heart of the leaders of fashion, of the Princess of Wales and other royal princesses, for instance, and win from them—as from Mme. Carnot, in the brief day of her power as Mme. la Presidente of France—a strong and public protest against what Lord Lilford has termed the 'destruction of birds for the disfigurement of women's heads.'"

NATURAL HISTORY NOTES AND QUERIES.

A Swallow's Nest.—In my coal cellar is a swallow's nest, with a brood of fine young swallows—the second brood this year. I understand that the same nest of clay, renovated a bit, has been a birthplace for swallows for many years, and in which every year two broods have been reared. There is an old chimney in the coal cellar roof, and thither every young brood is taken after leaving the nest, previous to launching right out into the more open country, but what is most strange, my Persian cat is there in the coal cellar with four young kittens. If she wanted to get to the young swallows she could do so with the greatest of ease. She would only have to jump on to a shelf to do so, but I am not the least afraid she will ever attempt it, although a better mouser never lived. If she knows there is a mouse about she never is at rest until she has it, but I broke her from touching birds when a kitten.

Hampstead. J. E. WHITING.

A Chaffinch's Friendship.—My aunt and I made friends with a male chaffinch who lived in our garden, and when he paired he brought his wife to call on us. We were sitting on the lawn when the introduction took place, and the two birds hopped round our feet and chattered rapidly, whilst looking us boldly in the face, and they fearlessly picked up some biscuit crumbs which we placed on the toes of our shoes. Eventually, they flew on the backs of our chairs, and a tame robin having set the example, they even alighted on our shoulders. We never attempted to search for their nest, though we fancied they wanted to take us to it, for they constantly walked in front of us when we were strolling round the garden. One morning, however, my aunt (who was accustomed to place food for them on the window sill of her bedroom), heard "Mr. Pye," as we called him, tapping against the window panes, and on looking out she saw the male chaffinch with a young bird on the window ledge, whom he left there, whilst he returned to the nest to bring another one, to be followed by his wife with a third fledgling. My aunt fetched me to look at them, and we opened the window and admired the young birds, the parents proudly watching us, and this performance was repeated each morning until the young birds came of their accord, and continued the friendship vouchsafed us by the parent birds. The entire family would now surround us whenever we went in the garden, and even accompany us on country walks, flitting along in the hedges whilst we walked in the lanes; but having to leave home for some three months we lost sight of our friends, and on our return in the late autumn our pets had disappeared, leaving us but the memory of simple trustfulness that has ever since increased our reverence for our feathered comrades. L.

Wasps.—We have had comparatively few wasps this year, and at first they were evidently short of food, for I have seen them go to flowers, which I think is not a common occurrence. I was watching the bees in some salvia bushes one day to see how they took the honey, which they did as with horse-chestnut blooms, by inserting their probosces between the involucre and the corolla, and I saw some wasps putting their heads into the flowers, evidently anxious to obtain the honey. Finding it impossible to gain admittance they attacked the throat of the flower, and gnawed a hole just above the involucre and put their heads in and drank the sweet contents. I found many blooms mutilated in this way, and though now there is plenty of fruit they still resort to them.

North Moreton, Wallingford. M. S. YOUNG.

The Tear-Pit in Deer.—My attention was first particularly drawn to this one summer afternoon when I was sitting in the garden of one of the principal cafés in Cassel a few years ago. The carcass of a red deer was brought out to be skinned and cut up, and going to witness the operations of the male cook, I soon entered into conversation with him. Presently, pointing to the tear-pit lying forwards beneath the eye, he told me that at the bottom of it there was always a hard substance in the form of a ball, and laying open the sinus with his knife he presented me with what I have now before me—an oblong ball of a sort of wax

and hair mixed; the length is exactly one inch, the greater breadth nearly half an inch, and the lesser not quite a quarter of an inch, the thing being somewhat flattened. The waxy substance resembles the secretion of the human ear when it has formed a lump the size of a pea and produced almost complete deafness, to be removed by careful syringing with hot water, as I know by personal experience. The wax in the tear-pit of the deer has a pungent smell, and has been supposed by some to be intended to attract the opposite sex, but must be, I think, an abnormal accumulation of the secretion of the cavity intended by nature to protect the delicate lining of the organ. The tear-pit has been noticed by ancient writers, but I am not sure that even to this day its use has been determined with any degree of certainty; in some cases it has an opening into the nose, and then it has been thought by some that its use is to allow of breathing when the nasal orifices are submerged in water, but this theory has not met with favour, and I think it is now more generally believed that the proper name of the organ should be tear-duct—providing for the escape from the eye, without inconvenience, of excessive tears that arise in the eye of the deer when chased in cold weather, and one can readily imagine how the increased breathing of the animal would dry up the tears as they flowed into the nasal cavity. In man we know there is such a tear-duct, but imperfectly developed as some of us know when our eyes "water" when we face the north-east winds. I should be glad if this subject were discussed, for those of my friends to whom I have mentioned it, like me, want enlightenment.

Belstone, Okehampton. GILES A. DAUBENY.

The Chiff-Chaff (p. 139).—I have observed that the chiff-chaff prefers an elevated perch. I have frequently seen one this summer, perched on the topmost twig of a lofty deodar, uttering his incessant chee, chee, chee, chee *chee;* it is amazing how this little bird can keep up this ceaseless repetition all day long. I have sometimes mocked it, when it would stop to listen and look at me, and then resume. It is not at all a shy bird.

E. PRICE SAYER.

The Glow-Worm (p. 159).—Rye, in his *British Beetles*, says that small mollusca (snails, &c.) form the food of the glow-worm, both in the larva and imago states.

W. H. WARNER.

Fyfield, Abingdon.

The late Rev. J. G. Wood, in his useful little book on *Common British Beetles*, says: "The larva of this insect feeds upon snails, forcing its way into the shell, and devouring the wretched inmate by slow degrees." The same naturalist says that he cannot give his adhesion to the theory that the light is intended as a beacon to attract the male; but, although I do not wish to appear to disagree with so high an authority, I may mention that, while staying in the New Forest this year, I noticed that the males flew into my sitting-room at Lyndhurst when lighted up in the evening, showing that, in common with many other insects, they are attracted by light; which circumstance, coupled with the fact that the female is unable to fly, and that her light is so much more powerful than that of the male, seems rather to uphold the theory.

W. HAWKER SMITH.

Musical Mice.—Is it a fact that mice have a fondness for music? One evening last winter, when all was still, I was somewhat startled at hearing my piano suddenly "giving forth sweet sounds," apparently of its own accord. A mouse, so it proved, had got inside the instrument, and was "making music" on the wires. Whether this was intentional on mousie's part or not I cannot say; perhaps he was trying to make a nest for himself there. Some years ago, however, while a piano was being played in the dining-room of my old home, several mice came out upon the hearthrug, and began to jump about, apparently with delight at the sound of the music, and one was either so absorbed or overcome by it that he allowed himself to be carried away in a tongs by the housemaid. Thinking that this particular mouse of which I speak might do some injury to the piano, I endeavoured to catch him with a small penny trap. But he was not to be so easily caught. Night after night he would take the bits of loose cheese placed inside the trap, but would not touch that on the hook which held the spring. At last one night he managed to knock down the spring by some means,

while he himself escaped, and from that time to the end of the winter I heard nothing more of him or any other mouse, either inside or outside the piano.

C. E. C.

Cuckoo and Hedge-Sparrow.—On Monday, July 29, in my friend's garden at Tunbridge Wells, I observed a young cuckoo being fed by a hedge-sparrow. It remained in the garden for the greater part of the day, and we were much interested to watch the little foster-mother feeding her large nestling. My friend puts daily supplies of crumbs, pieces of fat, &c., on her bird table both summer and winter. During the late dry weather, when grubs and caterpillars, &c., have been difficult to obtain, this food has been much appreciated, and I have counted nine various kinds of birds at different times in this small town garden. The water-pan which the birds prefer is a small brown earthenware of oblong shape, such as is used for rabbit troughs; being shallow, they can bathe without fear, and wait their turn for the morning bath with eagerness. To show how needful it is to put water within reach as well as food, I would mention that during the late hot dry weather, a friend living near London told me that she found a thrush lying on her lawn with its beak open, panting from the heat, and feared it was going to die. She got water, which it drank eagerly, and flew away quite revived.

EMILY A. CRAIG.

TO CORRESPONDENTS.

E. J. T.—(1) and (4) *Juncus articulatus*; (2) *J. glaucus*; (3) *J. conglomeratus*; (5) *Scirpus palustris*.

F. L. S.—"J. G." knew quite well what he was talking about, and the compilation you name has no claim to be considered a scientific work. If you want a further opinion of Mr. Grant Allen's *Story of the Plants*, consult *Nature* for August 15, where you will find a notice beginning "Mr. Grant Allen tells the story of the plants in a readable and very inaccurate manner," and ending "those readers who are ignorant of the real facts may find the book pleasant, though we can hardly add profitable, reading."

E. L.—We imagine the insect must be the forest fly (*Hippobosca equina*) which Mr. Kirby describes as "a brown species, about one-third of an inch in length, which attacks the horse, and is exceedingly annoying to the animal, but more for the irritation it produces by creeping about under the belly than by the actual puncture which it inflicts to suck the blood" (*Text-book of Entomology*, p. 239).

C. G.—Apparently only a large form of *Rosa canina*.

WE must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c. The Editor cannot undertake to reply privately to questions.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr WESTERN, as above.

SELBORNE SOCIETY NOTICES.

Donation.—The Council acknowledges with thanks a donation of £5 from Capt. James Cundy, of Southborough Park, Surbiton, in addition to his annual subscription of £1 1s.

To Branch Representatives.—The Council begs to remind Hon. Secretaries and representatives of provincial branches, of the monthly meetings, at 20, Hanover Square, on the first Tuesday in each month, at 5.30 p.m., and hopes that any who find themselves in town conveniently, will not fail to attend these meetings.

Donation to Selborne Library.—The Librarian reports the receipt from the publishers, The Unicorn Press, 211, Gray's Inn Road, of a copy of *How to enjoy a Holiday*. The Council acknowledges the donation with thanks.

Field Club Saturday Rambles.—

October 5.—Fungus Foray. To meet at Wood Street Station (Walthamstow), 3 p.m. (Liverpool Street at 2.34, Clapton 2.45), thence *via* St. Peter's Church and Waterworks through forest to Chingford. Tea at Forest Hotel about 5 p.m. Guide, Mr. F. W. Hildyard. Day return ticket to Chingford—Liverpool Street, 1s., Clapton 8d. Members who wish to identify specimens and consult authorities on fungi are invited by Mr. Hildyard, after the foray, to the Shuttleworth Club, Fye Foot Lane, Queen Victoria Street.

Field Club Report.—The Report of the proceedings of the Field Club during the past season was read at the Ramble of the 28th ultimo. A condensed report will appear next month.

The Field Club Committee invites suggestions for consideration in connection with the arrangements to be made for the Rambles of next summer. All communications on the subject should be addressed to the Hon. Secretary of the Field Club, Miss E. J. Temple, at 50, Clovelly Mansions, W.C., or at the offices of the Society, 20, Hanover Square, W.

Council and Committee Meetings.—The next meetings of the Council will be held on Tuesdays, October 1 and November 5, at 5.30; of the Magazine and Leaflet Committee on Wednesdays, October 16 and November 20, at 5.30; of the Finance Committee on Wednesdays, October 16 and November 20, at 6.30.

NEWS FROM THE BRANCHES.

Havant.—Notification has been received of the election of Captain J. Chippindall Healey, Hon. Sec., as the representative of the Branch on the Council.

Pinner.—A drawing-room meeting was held at The Hut on Wednesday, September 18, when Mr. Louis Davis continued his interesting series of addresses on the "Development of Leaves" to a good audience, the majority of whom were children. Lady Watkin Williams expressed her regret at vacating office, on account of leaving Pinner; and arrangements were suggested for carrying on the work of the Branch.

Nature Notes:

The Selborne Society's Magazine.

No. 71. NOVEMBER, 1895. Vol. VI.

THE HOME OF THE JACKDAWS.

ONE of the most interesting birds to study, in his intimate relations and habits, at home, is the jackdaw. We are seldom, it is true, able to trace the bird's ways in any other than some abnormal habit, such as he has, it is to be feared, acquired from his patrons or protectors. He has been given to the purloining of unconsidered trifles that may have been left about, or even of more valuable articles that have somehow come within his reach, more especially if they have been in any way tempting in form or colour. The jackdaw that we hear the most about had, at a great church festival, behaved so badly that, at length,

> "The monks with awe, as his pranks they saw,
> Said 'The Devil must be in that little jackdaw!'"

Afterwards this jackdaw carried off the Lord Cardinal's turquoise ring, and was excommunicated, with the dire result that, when next discovered, he was

> "No longer gay, as on yesterday,
> His feathers all seemed to be turned the wrong way;
> His pinions drooped, he could hardly stand,
> His head was as bald as the palm of your hand;
> His eye so dim, so wasted each limb,
> That, heedless of grammar, the monks cried 'That's him!
> That's the rogue that has done this scandalous thing,
> That's the thief that has stolen the Lord Cardinal's ring!'"

We all know, by frequent recitations, how that jackdaw repented, was received into the bosom of the Church, and that he

> "Long lived the pride of that country side,
> And at length in the odour of sanctity died;
> When, as words were too faint his merit to paint,
> The Conclave determined to make him a saint."

We thus find that the poets and the novelists, whom we may regard—especially the best of them, such as Dickens, George Eliot, and Thackeray—as our prose poets, are in the habit of treating the jackdaw on the humorous side, much as they do the parrot, the starling, the magpie, and the raven. Some of these birds have been taught to learn the language of men, and it is sad to know that what they take to most readily is swearing, and the use of bad language generally. From these instructors, too, they are apt to learn the arts of purloining and concealing; and of this the jackdaw's theft of the Cardinal's ring is a noteworthy example. In St. James's Park, I have heard an escaped parrot swearing soundly, to the amusement, though not to the edification, of some little boys that were listening. As a set off to such profanity, it might be well to record that once when an escaped parrot had got up a tree, it looked down on those that were seeking it beneath, and said, with great solemnity, "Let us pray!"

At the hands of one or two writers the jackdaw has, however, fared somewhat better. Vincent Bourne, who was one of the teachers of Cowper at Westminster School, has written on the jackdaw a Latin poem, in which he calls the bird a great frequenter of the Church, and fond of the speculative height of the weather cock, whence he securely sees the bustle that occupies mankind below, and wherefrom

> "He sees that this great roundabout,
> The world, with all its motley rout,
> Church, army, physic, law,
> Its customs and its businesses,
> Are no concern at all of his,
> And says—what says he?—Caw."

Cowper himself puts in a plea for such a bird as the jackdaw when he tells us that though he should not think of putting a goose into a cage for the sake of his melody, yet a goose on a common or in a farmyard was no bad performer. Much the same may be said of the notes of the jackdaws, which, when heard in their homes, seem very clearly in perfect harmony with their surroundings. In the famous white cliff by Chalcombe Headland, the notes of the jackdaw are mingled with the scream of the sea-gull, the rarer cry of the kestrel, and the harsh croak of the raven. There I should not regard the jackdaws as at home, though I have often found their nests mingled with other cliff-breeding birds, and, aided by the strata that there underlie the chalk, have, as a cliff-climbing boy, mounted, with difficulty, to the nest, and therefrom, unable to descend, have, with still greater difficulty, ascended by climbing to the summit, with one egg in my mouth, the only secure receptacle, amid the screams of many disturbed birds whose nests lay all around me. Other similarly tenanted cliffs I had often seen elsewhere.

But there is one perfectly ideal bay on our south coast which may be well called the *Home of the Jackdaws*. In that lovely bay

they occupy the lofty cliffs of pure white chalk all to themselves; and in these cliffs we may study the birds, in their intimate relations and habits, altogether unmolested, and entirely at home. In these tall cliffs there are deep vertical grooves, with many holes in each, where, entirely sheltered from wind, or rain, or storm, they may breed, and rear their young, and gather in colonies, and live entirely beyond fear of molestation, and quite at their ease.

In this charming little bay, which is a delight to all lovers of the picturesque, a gifted lady, who had written very interesting books on Norway and the Canaries, built, close to the sea, a house that she called by the name of the most poetical island about which she had written. This house, named after one of the most poetic heroes of romance—a hero whom we recall in connection with a hapless queen, whose wealth of golden hair shrouded her when she grovelled in the dust at the feet of her forgiving husband—was afterwards transformed into an admirably managed hotel, under the care and supervision of a lady. There, in a perfectly idyllic spot, quite free from cares of the world, a lover of quiet may enjoy the perfection of woman's management, attended, at small tables in a sweet dining-room, and elsewhere, by graceful handmaidens in pretty costumes, with all other details in harmonious accordance.

There a person of poetic tastes may enjoy a perfectly ideal holiday, quite alone with the abundant charms of nature. A secure roadstead sends forth multitudes of ships, in whose voyages he may take a passing interest. From a near arsenal there may come past, on trial trips, some powerful ironclad, armed with might, though not clothed in beauty; and, between the bay and the coasts of France, which often stand out in startling clearness and proximity, ships pass up and down all day long. Across the narrow channel the Spring migrants pass in hosts to their early landing-places on our shores; and from the north, as winter comes on, other birds pour down, seeking refuge from the land of the long night. And here, at his utmost leisure, if he be disposed, he may quietly observe the manners, at home, of the jackdaws. Life-paired birds, their intimate habits are worthy of attention. In qualities of *mind* they seem to excel all birds, just as others do in qualities of *melody*. Perched on small projecting pieces of flint, we may see them indulge in small caresses or tokens of affection; then, in wanton playfulness, they will knock each other off their precarious perches, with the same jocularity that, under other training, might lead them to purloin rings or teaspoons.

If you watch the bird closely, you may observe a peculiar look that holds attention more than mere beauty or grace. His flight is easy and buoyant, and he is very fond of aërial pastimes, such as chasing one another in play. When you see him sitting in repose with head drawn in, beak inclining downwards, feathers puffed out all round his head, face turned towards you, and his

bright, whitish-grey eyes set close together, he looks somewhat human, though, especially in the gloaming, a little uncanny. If you stroll on the high over-lying downs, some 600 feet or more above the sea, there, as Milton puts it,

> "Watching where shepherds pen their flocks at eve,
> In wattled cotes amid the field secure,"

you may see the jackdaws, mingled with the rooks, forming an harmonious conclave, in countless myriads, perching on the hurdles, hopping from one to the other, or to and from the sheep's backs, busy and, as always, gay, happy, and jocular. The reason why he gets on better than any of his friends of the other corvus-tribe is that he is, like the sparrow, very adaptive. He will breed apart from his fellows, like the carrion-crow; in common cities, like rooks; in hollow trees in parks; in ruins, and on church towers; or, perhaps best of all, in holes and crevices of the cliffs, where he may sometimes live with rock-pigeons and puffins. Gilbert White tells of jackdaws that built every year in the rabbit-burrows underground; that their nests were found by listening at the mouths of the holes to hear the young ones cry, and that the nests were then twisted out with a forked stick. Another spot used by these birds, which White thought a very unlikely spot, was Stonehenge, where they built their nests in the interstices between the upright and the impost-stones, though, he adds, they built so high that they were quite out of the reach of the shepherd-boys who were then always idling about the place. White remarks that the jackdaw's peculiarity in building at Selborne in the rabbit-burrows arose from the fact that there were hardly any towers or steeples in all the country; Hampshire and Sussex being then, as he states, more meanly furnished with churches than almost any counties in the kingdom. This he contrasts with the shires of Cambridge, Northampton, Huntingdon, and the fens of Lincoln, where he had been amazed at the number of spires that presented themselves in every point of view. As an admirer of prospects, he lamented the want in his own country of what he considers very necessary elements in an elegant landscape. Since that time the want has been fairly met, as we can see by looking over the New Forest at the elegant spire of Lyndhurst Church, or at the towers and spires of the churches in the fine town of Bournemouth. We generally find that, like monks of old, jackdaws continue to live on the fat of the land, though often without ostensible means of living. They are apt at levying blackmail on sillier birds, such as guillemots, whose prey, brought for the young ones, they often carry off.

Playing around churches, the ecclesiastical daws secure a certain immunity, and justly so, too. You may find a pair building for years just under the single bell of some church, caring nothing for the frequent and loud sound; and apparently training their offspring in good church principles, and sending

them off to inhabit church-tower or belfrey elsewhere. In their exercises you may see them circle about in the air, pursue and playfully buffet one another, mount aloft and then tumble downwards, renew work, and then chase and battle again. They are loquacious birds; they call loudly on each other when perched or in flight, and their voice has a clear, sharp, querulous sound, somewhat like the bark of a small dog.

Amid such pleasant surroundings, we may well watch the habits of these interesting birds, while enjoying to the full the much-needed delights of the *dolce far niente*. Here, surely, you may be content to do nothing, and to enjoy such needed rest. And here, more than anywhere, the jackdaws are thoroughly at home. The cliff-breeding gulls abound here, as on all the seas around our coasts, but they have their homes in neighbouring cliffs. An ancient pair of ravens may, now and then, be seen here; but these wary birds, too, breed with the gulls, and live on terms of amity with the jackdaws here, although at the Devonian Headland I have seen another pair of long-lived ravens mobbed by a mingled flock of rooks and jackdaws till they were glad to find a refuge from their persecutors in some wood or cave. Thus the jackdaws have these cliffs entirely to themselves.

In winter there flock in from Norway the hooded-crows, with whom the jackdaws do not amalgamate so peaceably as they do with the rooks. Seeking to appropriate to themselves the best holes, the crows come at times into conflict with the smaller and less powerful jackdaws, and a temporary dispossession sometimes takes place; but the holes in the cliffs are many and deep, and there is room enough for all; thus the birds live on, under occasionally strained relations, till, as spring comes in, the crows fly off to their breeding places in Norway, and the jackdaws are again left sole tenants of the cliffs. And whether Hobbes of Malmesbury was right or not in his philosophic maxim that the normal state of *mankind* is a state of warfare, it seems to be certainly the normal state of *birds;* thus we may regard the winter stage of warfare as a period of enjoyment in conflict for both daws and crows. Besides the ecclesiastical daws that frequent churches, we may find some archæological daws in old ruins like those of Corfe Castle; but they get sadly interrupted by visitors who take luncheon on the grass underneath, and they do not form there so numerous a colony as they do in this bay.

Ravens are not, as to offspring, like the jackdaws. The young ravens are said to send off their *parents* to seek a home elsewhere. An intelligent old workman, who was engaged in some work just under the jackdaws' home, said he should not have liked his children to send him off as the young ravens do. And as he was working with his son, while a little grandson was playing on the beach close at hand, he had presumably fared better than the old ravens are thought to do.

With these daws and crows it is pleasant to connect the greatest of all poets, for the jackdaw is no doubt Shakspere's

chough that figures in this passage from *Lear*, written of a neighbouring cliff:—

> "The crows and choughs that wing the midway air,
> Show scarce so gross as beetles; half-way down
> Hangs one that gathers samphire; dreadful trade!
> Methinks he seems no bigger than his head.
> The murmuring surge
> That on the unnumbered idle pebbles chafes,
> Cannot be heard so high."

In the corvus tribe, the best of poets are sometimes indiscriminating or inexact, as, for example, Tennyson, who, though one of the best of poets about birds, writes of "the many wintered *crow* that leads the clanging *rookery* home." Thus the jackdaw is probably the bird called chough in the fine old glee that tells us that "the chough and crow to roost have gone."

As we recall these things we can see growing all around us in luxuriance, at the foot of these cliffs, the samphire that Shakespere's Edgar saw one gathering, as a dreadful trade, half way down. And as we sit about or move about here, we may well satisfy ourselves, by careful observation of the tides, that it was past this very bay that the great Cæsar passed with his ships on that August afternoon just 2050 years ago, when he tells us that, after lying at anchor till the tide turned—as we see sailing vessels and French fishing boats having to do now—he sailed with the tide to find a suitable landing place clear of the cliffs where from missiles might, he saw, be readily thrown by the waiting Britons upon his troops below. And we may, at ease, walk by the very cliff route along which marched the watchful British troops with their war chariots, following the Roman legions as they sailed past. With pretty fair certainty we may feel that we have come to the very beach where the mighty Julius beached his boats and ships and attempted to land, whereupon the Britons marched into the sea, with cavalry and war-chariots, and seemed to have the Romans entirely at their mercy. In such a new kind of conflict, fighting at every disadvantage, the all-conquering legionaries might well show some hesitation in jumping overboard till, after calling upon the Gods to favour his attempt, the standard-bearer of the famous tenth legion sprang with his eagle into the sea, calling out with a loud voice these ever-memorable words:—"Desilite, commilitones, nisi vultis aquilam hostibus prodere: ego certe meum reipublicæ atque imperatori officium præstitero." With Cæsar's *Commentaries* in hand, we may call up there the scene of the first recorded battle ever fought on our shores; and we can well imagine that it was a very close and sharp fight (Cæsar says it was "*pugnatum acriter*"), and though, with their famous short two-edged swords, the well-disciplined veterans triumphed, it was only after a very sharp struggle; so that we feel that our ancestors were nowise disgraced. The next year, as we know, Cæsar came earlier in the year with 800 ships, and a mightier

array of legions; that the Britons, feeling they could not oppose such an array on the shore, allowed him to land, placed Cassivelaunus at their head as leader, watched and impeded the Romans across the Stour, therefrom across the Thames, for which the latest critic (Col. Dodge, in 1892) states that "Cæsar chose a spot between Kingston and Brentford," thence on to St. Albans, Cassivelaunus's capital, till, at length, by tribal disunion and dissensions, the usual Celtic failures, Cæsar managed to patch up a peace, to impose hostages that were never sent, and to get back, fortunately, before the winter gales came on. Bearing in mind how the August springtides had nearly made an end of the first fleet, drawn up and handled by those who had known hardly any tides in their own Mediterranean, and how the boisterous gales of the inhospitable coast had nearly wrecked the second fleet, we may feel sure that Cæsar had as narrow an escape on our shores as ever he had from the water-drinking Nervii—whom he praises alike for temperance and for bravery—two years earlier in Belgium, and that it was by the merest good luck that the Romans ever got back at all, even though led by that Caius Julius Cæsar, whom a great historian proclaims to be "the greatest name in history." Thus the Queen of Shakespere's Cymbeline had, we feel, good reason to recall to her people:

> "The natural bravery of your isle, which stands
> As Neptune's park, ribbed and paled in
> With sands that will not bear your enemies' boats,
> But suck them up to the topmast. A kind of conquest
> Cæsar made here, but made not here his brag
> Of came, and saw, and overcame: with shame,
> The first that ever touched him, he was carried
> From off our coast twice beaten; while his shipping,
> Poor ignorant baubles! on our terrible seas,
> Like egg-shells moved upon their surges, cracked
> As easily 'gainst our rocks."

With reminiscences such as these it is pleasant to associate one of the most restful and charming places that could be found wherein to spend a peaceful holiday. And to a student of bird-life it may be well to remember the spot as, more especially, the Home of the Jackdaws.

Richmond-on-Thames. W. J. C. Miller.

"**Very Womanly!**"—"Very womanly indeed! The *Queen* of last week contained a drawing of a so-called lady, tricked out with feathers and wings, engaged in the highly feminine sport of shooting, while a keeper beside her carries a bunch of blood-dabbled birds. Oh! yes, the gentle sex! And it is women, without heart as without thought for anything but pleasure and vanity, who are mainly responsible for the desolation that is slowly creeping over the whole earth. No bird of any sort is now safe from the spoiler. And the rarer and more beautiful it is the more eagerly it is sought—sought, too, for the sole purpose of ministering to the paltry pride of painted and frivolous women." —*Newcastle Daily Chronicle, September* 7.

SEAWEEDS.*

THE number of people who take an interest in seaweeds and wish to know something of their structure and life-history is gradually increasing. To such the publication of *An Introduction to the Study of Seaweeds*, by Mr. George Murray, of the British Museum, will be a welcome announcement. The books hitherto at the service of amateur collectors, though good in their way, were either too "popular" to be of much use, or were merely systematic, and it was impossible to form from them any clear idea of the plan on which seaweeds were classified.

MACROCYSTIS PYRIFERA.

Mr. Murray begins his book with an interesting introduction, in which he deals shortly with the history of the study of marine algæ, and then goes on to point out the way in which they are classified into *Rhodophyceæ* or red, *Phæophyceæ* or brown, *Chlorophyceæ* or green and *Cyanophyceæ* or blue-green. This classification of them, which corresponds to their colours, would seem to

*An Introduction to the Study of Seaweeds, by George Murray. (Macmillan & Co., 1895, pp. xvi., 271, 88 figs., 8 coloured plates, 8vo. Price 7s. 6d.)

be artificial, but observation has proved that "it nearly coincides with the natural classification of them according to their structure and development." The rest of the introductory chapter treats of salinity of water and change of temperature as affecting seaweeds, their distribution in time and space, their growth and their economic use. Mr. Murray also gives instructions as to the best method of collecting, both from the shore and by dredge, and how to mount and preserve specimens dry and in spirit.

Most books on seaweeds deal first with the group of *Rhodophyceæ* or red algæ, as being that which contains the most complicated and highly differentiated forms, descending through the brown and the green to the blue-green or simplest form of seaweed. Mr. Murray, however, deals first with the familiar brown seaweeds—the first to meet the eye of any collector. The *Fucus* or bladder-wrack, which we have all popped with such

POSTELSIA PALMÆFORMIS (enlarged).

satisfaction in childhood, the long tangles floating on the surface of the waves, and many of their representatives in foreign oceans, are here figured. To those who have not access to any large herbarium many of these figures will be of much interest, as showing them forms which are closely related to our British ones, though found only in the southern hemisphere. *Macrocystis*, the largest of all seaweeds, with its fronds hundreds of feet long, supported on the surface of the water by means of air-floats, and *Postelsia*, rightly named *palmæformis* from its palm-like appearance, are among the foreign forms figured here. It is an added attraction to this book that many of the illustrations are new, and the rest have not, as a rule, ever appeared in any text-book before.

Mr. Murray divides the brown seaweeds into a number of orders, as to the limits of which he does not wholly agree with other botanists. It is a relief to find that his tendency is to acknowledge fewer rather than more natural orders, thereby simplifying the work of the student; and it is especially welcome in this group, where it is too often the practice to found a new order on every new genus.

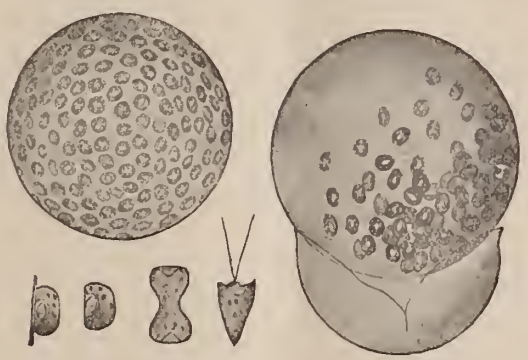
Under each natural order Mr. Murray gives first an account of the general characters which distinguish it, and then goes on to describe the thallus or non-fruiting portion of various types of plants in the order. He then gives a detailed description of

CERATIUM TRIPUS.

the methods of reproduction, and, lastly, gives the geographical distribution of most of the genera belonging to the order, especially noting the British ones. By this arrangement it is possible to find out at once the life-history and the range of almost any genus. The brown seaweeds are followed by the green, on some orders of which Mr. Murray is a special authority, namely, those dealing with the multinucleate forms. In one tropical genus, *Caulerpa*, in which the plants are composed of one single cell, it is interesting to notice the many various forms which the species take. Some of them resemble mosses,

club-mosses, cacti and other higher plants so nearly as to be named after them; and in order that the one branching cell may sustain the strain on its walls entailed by this complexity of outward form, there is a mechanical support provided by "a system of trabeculæ or narrow beams, branching and traversing the cell from wall to wall in all directions." Even many expert botanists will make their first acquaintance with some of these multinucleate forms in this book.

Among the green seaweeds we find an account given for the first time in any student's manual of the microscopic floating algæ which constitute so large a part of the marine flora. To the *Peridinieæ* belong the minute organisms called *Ceratium*, which cause the phosphorescent light on the surface of the sea off our own shores, and the species of *Pyrocystis*, which were observed during the "Challenger" expedition. Mr. Murray says of this: "It is a tropical form, and to it was attributed the most brilliant displays of luminosity during the Challenger expedition." *Halosphæra viridis* (*Protococcaceæ*) is a beautiful globular form, which



HALOSPHÆRA VIRIDIS.

floats in large quantities in the warm and temperate Atlantic and Mediterranean. Rhabdospheres and Coccospheres occur in temperate and tropical seas, and "their broken-down parts . . . form a not inconsiderable part of deep-sea deposits, except those laid down in polar and sub-polar seas." It is interesting to note the distribution of these plants. In tropical seas Rhabdospheres prevail, Coccospheres are characteristic of the temperate seas, while round the coasts in temperate regions we have *Peridinieæ*, and these all give way to *Diatomaceæ* at the polar regions, where these organisms "greatly outweigh all other pelagic plants." Indeed the quantity of diatoms and of the minute animals that subsist on them in the polar seas is so great, that a distinguished traveller has declared them to be sufficient to sustain human life in cases of need, and that no polar expedi-

tion should be considered fully equipped without a supply of fine silk bags in which to catch these plants.

The bulk of this floating microscopic flora far outweighs, strange as this may seem, the coastal flora of the world. Mr. Murray says: "A recent estimate of the bulk of this flora compares the inconspicuous marine organisms of the Sargasso Sea with the bulk of the floating banks of gulf-weed that give this great tract of ocean its name, with the result that the microscopic forms enormously exceed the gulf-weed in aggregate mass. The result is all the more striking since it is known that the Sargasso Sea is poor in these minute forms compared with many other regions of the ocean." The whole subject of microscopic floating algæ has, however, only been studied for a comparatively short time, and the investigation of them in their living state is much to be desired.

In his arrangement of the red seaweeds, Mr. Murray has adopted the new classification of Professor Schmitz. It still remains to be seen whether this will prove as convenient as the older system. The book ends with an account of the blue-green seaweeds, a difficult, and to amateurs an uninteresting, group.

It is to be hoped that the publication of Mr. Murray's book will tend to encourage the study of this interesting branch of botany, which should specially appeal to such a sea-loving nation as ourselves.

E. S. Barton.

WINTER VISITANTS.

AUTUMN is again with us, and with autumn a change almost as great as in spring is wrought in such birds as are prepared, with the regular visitants, to spend the winter with us. Sparrows, though not in numbers such as I may expect a month hence, have returned from the corn fields and hedges in great numbers, and, with the pigeons, are ever asking for food. They take it greedily, but as it were stealthily and thanklessly, ever on the watch for some hidden attack; even whilst feeding most greedily, now and again they start up in a body seeking the shelter of the ivy-covered laburnum close at hand, from which, the causeless panic abated, they speedily return and proceed with their meal, again and again to be interrupted in the same causeless manner. As they rise they leave on the ground two or three chaffinches, who, conscious of their own rectitude, and fearing no evil, remain. "The wicked flee when no man pursueth."

Whether in gratitude for my day dole, or reminded of their duties by an old broom I stuck at the top of a beech, two pairs of rooks bred in the garden last spring. One nest came to grief, but the other supplied three or four young ones, which,

with their parents, are constant partakers of the delicacies I provide. They are especially tame, sit on the rails within a few feet as I pass, and feed with the pigeons close up to the windows. But they will never meet my eye; to look at them straight in the face at once puts them to flight. By the way, it seems to me that rooks are the only birds that *see through glass*. No movement in the room affects other birds, but rooks are cognizant of all that goes on, and an approach to the window is the signal for immediate flight. Some rooks feed their young, more or less, to a late period in the autumn. I have seen the process late in November. A flock arises pretty early in the morning through the greater part of the year, and there is generally, though not always, a black crowd on the lawn at breakfast time, favouring me with a second visit at luncheon.

Summer birds, of course, have long since departed, and the winter visitants are seldom in evidence, at least after the very early morning. Thrushes abound, especially the missel thrushes, who affect the yew berries so long as they last. The berries of the Irish yew are not so much to their taste as those of the common yew, but having cleared the latter all off, they are now hard at work on the Irish. The berries grow on the lightest twigs, and as they will not support the birds the thrushes obtain them by jumping up from below in a comical manner. The bullfinch and greenfinch nip off the sprays, and descending, eat the berries on the ground. They make a sad litter. There is a good crop of nuts this year, and squirrels and nuthatches are constantly seeking them. The squirrels' abode is at a considerable distance ftom the trees, and I fancy that they carry away the nuts, as do the nuthatches, one at a time, depositing them, no doubt, in a hoard for future use. The nuthatches only fly to a suitable tree where the rough bark enables them to fix the nut and to break the shell.

GEORGE ROOPER.

OF GARDENS.

IT is happily not only misfortunes that come "not as single spies but in battalions." The delay which prevented us noticing sooner Canon Ellacombe's *In a Gloucestershire Garden** enabled us to place beside it the Hon. Mrs. Boyle's *Garden of Pleasure*,† and now Mr. Alfred Austin's *Veronica's Garden* ‡ comes in time to be included with them.

The three books have much in common. The author of each has written on the subject of gardens before, and is fortunate

* *In a Gloucestershire Garden*, by Henry N. Ellacombe, Hon. Canon of Bristol. (Edward Arnold, 6s.)

† *A Garden of Pleasure*, by E. V. B. (Elliot Stock, 5s.)

‡ *In Veronica's Garden*, by Alfred Austin. (Macmillan & Co., 9s.)

enough to be able to pourtray from actual experience the delights which less favoured readers can only enjoy from descriptions. Each book is illustrated and attractively got up; indeed, if we were anxious to make some garden-lover happy by a present of a book, the part of Paris would not be easy to play. Apart from the interest of the subject, each writer knows how to employ the English language, and each has read and remembered much that other garden-lovers have done and written.

We may begin with Mrs. Boyle's dainty little book— a companion to *Days and Hours in a Garden*, which was noticed in NATURE NOTES for 1890, p. 57. What was said in praise of the former work is equally true of this, while the hint then given as to the spelling of the Latin names must be repeated. If Mrs. Boyle, failing other help, would allow us to look through the proofs of her next book, we would save her from such disfigurements as "serastium," sysirhinchium," "flexiosa," "pomefera," "scylla," and "sandades"—this last entirely baffles us, though the context suggests scabiosa.

This volume is a record of observations made in a garden near Maidenhead. In the forefront of the book, at the end of the preface, is a charming tribute to "the gardener, Jesse Foulk, by whose rare skill this plot grew into a Garden of Pleasure, whose ceaseless care has maintained its charm for three and twenty summers, and who completes the thirtieth year of his devoted service on the 22nd of May." This praise of a fellow-labourer has a pleasant sound in these days, and suggests the old saying "good mistresses make good servants;" and Mrs. Boyle's wise words as to the recognition of the share which a good gardener has in bringing about the desired ends, should be laid to heart by all who possess so invaluable a help.

As might be expected, there are true Selbornian touches here and there, such as this :—

"In the winter after Christmas, the holly trees in the garden shone scarlet, loaded as they were with berries. We had planned to cut away several branches of them, but until the birds had stripped the fruit, the gardener's knife was not to be lifted for the pruning. Yet scarcely had the wise thrush began to feast, when down there swooped upon the hollies such flocks of fieldfares from the open country, that in a day the trees were bare, so the poor throstles—to whom of right the garden fruits belonged—starved, and were found dead in numbers. The motto of wild Nature is always necessarily, 'Live, and let die who may.' And thus there is many a small tragedy enacted often in the garden."

Birds have a prominent place, as is fitting, in this Garden of Pleasure :—

"All winter through up to the end of March, or longer, coconuts"—we hope E. V. B. will accept this spelling as more correct if less usual than her own—"hang from the rose arches for the titmice. The hole is alway made in the lower part, so as to discourage the sparrows, who do not fancy hanging head downwards (it is not that they could not do it, for there is nothing they cannot do if they try). For a long time they did not understand that coconut was good. But unfortunately a nuthatch let fall some crumbs of it one day; and then the sparrows found out how nice it was."

Readers of NATURE NOTES will remember that E. V. B.'s

lovingkindness extended itself to sparrows at a time when our pages were filled with a controversy—which we have no intention of reopening—regarding those saucy imps.* Now she finds a fresh excuse for their ways: "it is the shape of their blunt, coarse beaks that affects their whole nature!"

We must not forget that we have two other books to notice, but we cannot leave this "garden of pleasure" without calling attention to its quaint illustrations. How many years ago it is since we delighted in E. V. B.'s illustrations to *The Story without an End* we do not care to remember, but the hand which drew those has not lost its cunning, and the little cuts add an additional charm to an otherwise charming book.

Canon Ellacombe's volume is also illustrated, but we do not think the pictures add to its attractiveness. They are well enough in themselves, but have little connection with the text, and give the impression that they have done duty elsewhere. Publishers are over-fond nowadays of using up old blocks in new books, forgetting that illustrations that do not illustrate are rather worse than none at all. Mr. Rylands' pictures of the months are pretty enough in themselves, but have nothing in common with Canon Ellacombe's chapters; while the ugly, foreign-looking block called "a Devonshire lane" bears no reference to "brambles and thistles," although it is stuck into the middle of the chapter so headed. The omission of all the illustrations would remove the only blot upon this delightful book.

The name which is given to the whole volume applies in strictness only to the first part, which treats of observations made from month to month in Canon Ellacombe's garden at Bitton, to which are added many interesting notes on the association which the various plants suggest. Bitton is a familiar name to the lover of herbaceous plants, and many treasures have found their way thence to gardens up and down the country. Canon Ellacombe's book has a more literary flavour than Mrs. Boyle's; those who know his former writings are aware that he is intimately acquainted with the old herbalists, not in the style of those writers who quote (at second or third hand) "dear old Gerarde" (always with the final e, which he himself does not seem to have used), but from frequent consultation; and his citations from them, like his poetical quotations, are unhackneyed and well chosen. The books he refers to incidentally show that he has a thorough knowledge of the best garden literature; we note with pleasure the tribute paid to the charms of a too little known book, now, we believe, out of print—Dr. Forbes Watson's *Flowers and Gardens*.

The associations of certain flowers with certain people are often referred to, and Cardinal Newman's touching reference to the snapdragon is quoted from the *Apologia*. This seems to have

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* See NATURE NOTES, 1892, p. 109.

been the great ecclesiastic's favourite flower; so early as 1827 he made it the subject of a poem—"a riddle for a flower book," he called it—in which he embodied the same idea to which he refers in his later prose. "There used to be much snapdragon growing on the walls opposite my freshman's rooms, and I had for years taken it as the emblem of my own perpetual residence, even unto death, in my University." So Canon Ellacombe cites, and the verses we have mentioned end

"then well might I
In college cloister live and die."

A misprint of "wallflowers" for "wall flowers" led us to think that the Canon identified Tennyson's "Flower in the crannied wall" with the *Cheiranthus*, but the context shows that this is not the case. If we refer to another misprint, "Thring" for "Tring" (p. 276), it is that we may assure the writer that the "beautiful hillside studded with *Pulsatilla*" is by no means "a thing of the past;" the pasque-flower still flourishes there, extending almost up to, but not across, the boundary between Hertfordshire and Buckinghamshire. "*Meiziesii*" (p. 284) is a curious slip for "*Menziesii*," and we are afraid that Canon Ellacombe places credence in the genuineness of T. F. Forster's spurious antique, judging from his citation of this as evidence of the connection of the clematis with the Feast of the Assumption, for which connection there is, we believe, no other authority.

But Mr. Alfred Austin calls us into "Veronica's Garden," and thither we must accompany him. We have been there before,* and are not quite sure that we want to return just yet. There is much that is charming in the book, notably the author's verses, some of which take rank with his best; but we get a little tired of the highly refined people whom we meet, who become somewhat wearisome on closer acquaintance. And we have a suspicion that Mr. Austin does not know quite so much about gardens as at first appeared; certainly his knowledge cannot be compared with that of Canon Ellacombe or "E. V. B." The typography of his names is wanting in uniformity; here on two opposite pages (102-3) we have "*Centaurea candidissima*," "lobelia cardinalis," and "Bartonia Aurea." And why should the Lupines and the Mallows be capitalized, while the pelargoniums and snapdragons have small beginnings? In mis-spelling "Fuschia," Mr. Austin has many companions; folk would avoid this if they remembered that it commemorates Leonhard Fuchs.

Still there are delightful passages in the book. Who that has travelled has not experienced the home feeling which fills the traveller when he is hurried through Kent on his return from "abroad," and which Mr. Austin so well expresses:—

"Fresh from [Italy] as I am, I gazed this afternoon, as I was borne swiftly homewards, on our fresh green English copses, on an English pasture with their

* See NATURE NOTES, 1894, p. 130.

grazing flocks and skipping lambs, on English hamlets nestling in untrimmed trees, on English hedgerows and lavish wild flowers, on village churches towering over red-roofed cottages, and once more, if I may be forgiven for saying so, I blessed Heaven for my British birth."

This is a charming picture, and as true as it is charming. This reminds us to say that the volume is adorned with pictures, which, unlike those in Canon Ellacombe's book, really illustrate the matter in hand. And here we leave these delightful books, which will carry on for us in their pages during the winter months the memory of the realities which we have enjoyed during the beautiful summer now past.

SELBORNIANA.

Floral Decoration of Railway Stations.—"To encourage the cultivation of flowers at the railway stations on the Midland Railway Company's system, that company offered £200 in prizes among their station-masters, covering nearly two thousand miles of rail. There were upwards of two hundred entries for the competition, and the first prize was awarded by the judges to the station master at Matlock Bath. The prizes amount to £50 more in value this year than in previous seasons."—*Pall Mall Gazette.*

Bird Protection in Paris.—"The Prefecture of Police in Paris is determined to protect wild birds which are useful to agriculturists. During last week no fewer than two hundred bird sellers were arrested, and heavily fined, while all the birds in their possession were impounded and set at liberty in the Bois de Vincennes. The result is that now most of the bird shops, which were to be abundantly found in the Notre Dame quarter of the city, are being closed, while shopkeepers in other districts find it practically impossible to carry on their trade on account of strict regulations imposed by the police. The time has arrived when similar steps should be taken by the Chief Commissioner in London."—*Echo, August* 29.

A Bad Example.—Three schoolboys—friends of mine—caught forty swallowtail butterflies (*P. Machaon*) in the Eastern Counties, on August 8, and twenty more on the 12th. We also saw several on the Norfolk Broads, which is rather unusual, I fancy, of late. Here in Kent we have caught several specimens of *Colias Edusar* at the end of September this year.

CHARLES TERRY.

[We print this note (which was sent to our publishers at an address not theirs) as an example of the way in which our rare insects are being exterminated. No wonder swallowtails are "rather unusual of late," if every specimen is captured as soon as seen. We have never sided with those who would entirely prevent collecting, but even schoolboys should be taught that nothing can justify the taking sixty specimens of a rare insect or plant. We trust that all Selbornians will use every effort to discourage such wanton destruction.—ED. *N.N.*]

Destruction of Moles.—The enclosed cutting from *The Daily News* of October 14 is too significant to be overlooked. I commend to the careful attention of Selbornians this instance of the wisdom of modern scientific men. Their method appears to be first to destroy all the owls and hawks, until the country is over-run by mice and moles; then to destroy moles (by the hateful means described below) until there follows a plague of wire-worms. Will they then inoculate wire-worms? It remains to be seen. There has been much talk about the danger of disturbing the balance of power in Europe. Surely common sense might have proved to us by this time the infinitely greater danger of dis-

turbing the balance of power in Nature. When one reads of such vile practices being deliberately and boastfully carried out it is hard not to wish that some one could catch, and inoculate with disease, two or three of the inoculators, and turn *them* loose, *pour encourager les autres*.

"Dr. Calmette, formerly an assistant of Dr. Roux at the Pasteur Institute, and brother of M. Calmette of the "Figaro," who got up the great subscription to supply anti-diphtheria serum to France, is now at Lille. He is the head there of a junior institute modelled on Pasteur's. It appears that he is clearing the department of the Nord of moles. He does this by inoculating a few moles with a contagious disease and then letting them loose. The consequence is a black death among these destroyers of wire-worm. Might it not (asks our Paris Correspondent) be better to breed and protect hawks, owls, and falcons, and leave to them the task of getting rid of the surplus population of moles? I never knew of successful raids in the country on moles that were not followed by a great increase of wire-worm and other vermin. The mole is the farmer's best auxiliary. It is also risky to propagate artificially a malady that will kill moles. This creature is highly organised. What kills it might communicate a distemper to cattle, or even to human beings."

B. A.

NATURAL HISTORY NOTES AND QUERIES.

The Cuckoo.—I observe in the interesting article on "A Bird-haunted Pine Grove" (p. 142), the statement that "the cuckoo, like the nightingale, does not seem to love the close neighbourhood of the sea." In the little peninsula of Gower in South Wales, a district where I acquired most of my knowledge of birds about twenty-five years ago, and which is still, I believe, a paradise of bird life, I remember that the cuckoo was particularly common near the sea, although, as far as I am aware, the nightingale never appeared there, and indeed I have been informed that a gentleman resident in that district made an unsuccessful attempt many years back to introduce the nightingale into the peninsula. I cannot, however, speak with confidence as to the presence or absence of the cuckoo at any other seaside district, as the peninsula of Gower is the only place near the sea with which I am sufficiently familiar during the season when the cuckoo is with us.

Hampstead. J. U. Voss.

Cats and Birds (p. 197).—Mr. J. E. Whiting mentions having broken a cat from touching birds when a kitten. Would he kindly inform the readers of NATURE NOTES what plan he adopted for securing this desirable end.

M. C. B.

White Varieties of the House-Sparrow.—On September 18 I saw just opposite Whitehall a sparrow with white markings on nearly every feather. As it fed with some companions in the road, I could clearly see that it was no true albino as its eyes were black. There is another white sparrow at Margate, it has been there two years now, and any visitor who keeps his eyes open when near the North Foreland Lighthouse is pretty sure to see it; this one is a very fine species, almost entirely white. White varieties are not so rare as melanisms, but I think they are worth recording.

GRAHAM W. KERR.

A Strange Visitor.—On September 2 at 11.30 a.m., a bird flew in at the open window and dropped down on the carpet at the back of my chair. I had been reading a paper by "A Son of the Marshes," which stated that "if you wish to study natural history you must remain quite still, and rabbits, fish, birds, &c., will not seem to be aware of your presence, and will come out in the woods and have long games of play, but if you move only hand or foot the spell is broken," so I sat still. A young hen pheasant walked majestically before me. The pretty creature seemed quite at home, then flew upon the sofa, and from thence to the

top of a cabinet, full of valuable china. The pheasant walked backwards and forwards for ten minutes, so gently that nothing was broken, then it first nestled at my feet, then flew on a chair, then to the ledge of the open window. The height from the street seemed to alarm it, and it turned carefully round. It looked into the room, its body resting on the ledge outside the window; my maid came in and put out her hand to take the pheasant when off it flew, after being in my sitting room exactly forty minutes. It must have come more than a mile from Ribbesford. B.

A Book of Beasts (p. 187).—In the notice of the above book mention is made of some superstitious notions respecting the setting of poultry eggs, so it may interest your readers to know that like ideas prevail in some parts of Wales and in Hants at the present day. If you purchase a sitting of eggs, they always give you an odd number, or if you tell your man or woman servant who attends to the poultry you wish a "broody hen" put to set, they tell you, if the moon is on the wane, that the chicken or ducks, as the case may be, will be weakly.

HELEN WATNEY.

TO CORRESPONDENTS.

J. M. V.—Dr. R. B. Sharpe says it would be impossible to name the bird from the description given.

S. S.—Too decomposed to identify.

C. P.—(1) Mr. Kirby says:—"Such things have been recorded, but no explanation has been offered, except that some error must have occurred. Possibly, however, a caterpillar, infested by a large parasite, might assume the pupa state, and the parasite might emerge from it and form a pupa likewise. Clusters of small pupæ formed round dead caterpillars are not uncommon. The caterpillar is not likely to have been that of the Spurge Hawk moth, which is excessively rare in the British Islands." (2) No, we cannot recommend them. (3) For books on Mosses, see NATURE NOTES, 1892, 207; 1893, 214. Mr. Jameson's *Illustrated Guide* is out of print, but will, we believe, shortly be re-issued; his *Key to the Genera and Species* may still be obtained from West, Newman & Co., 54, Hatton Garden, E.C., price 1s. 6d.

M. C. H.—Dr. Sharpe says:—"White martins are not uncommon. As far as is known they remain albinos. They are not likely to resume full plumage, but sometimes young birds which are white gain ordinary plumage after the moult."

W. B. G.—The account is purely mythical, and, if we mistake not, was originally published as a burlesque of other marvellous records.

E. H.—One of the many forms of *Quercus Ilex*: it is not uncommon.

L. W. C.—The pamphlet you send was referred to on p. 55; we hope shortly to publish a longer notice.

WE must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c. The Editor cannot undertake to reply privately to questions.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

SELBORNE SOCIETY'S NOTICES.

Notice of Special General Meeting.—In accordance with a resolution proposed by Mrs. Percy Myles, and seconded by the Rev. H. E. Bull at the Council Meeting of October 1, notice is hereby given, that a special general meeting will be held on November 5, at 6.30 at the Society's Rooms, 20, Hanover Square, W., to consider the adoption of a rule allowing of the admission of juvenile natural history societies to membership.

Council and Committee Meetings.—The next meetings of the Council will be held on November 5, and December 3, at 5.30; of the Magazine and Leaflet Committee on November 20 and December 18, at 5.30; of the Finance Committee on November 20 and December 18, at 6.30.

Report of the Field Club for the Season ending September, 1895.

Read at the meeting of the Field Club at Winchmore Hill, September 28.

Condensed account.

Mr. Thistelton Dyer said in his Presidential address at Ipswich a few weeks ago, when the British Association met in that city, that "the modern student of botany put his elders to blush by his minute knowledge of some small points in vegetable histology. But he could tell them little of the contents of our country hedgerows, and if they put an unfamiliar plant in his hands, he was pretty much at a loss how to set about recognising its affinities." These words at once form a *raison d'être* for the existence of the Field Club. The area covered by the excursions of the Field Club round London must, owing to circumstances easily understood, be circumscribed, and probably many Field Clubs in other parts of the country can show far greater records of work done. But the old botanists had thought it worth while to mention that turnips grew at Hackney, and that peas were originally known as Fulham peas because they grew at Fulham, and therefore if we can find such an ordinary plant as the ivy-leaved toad-flax growing on a wall some six miles from Charing Cross, it is worth noting.

Twenty-three rambles have been arranged during the season, only three of which had to be postponed on account of the weather. The number of people attending them has varied greatly, partly owing to the weather, partly to the locality. The meetings at Theydon Bois, Waltham Cross and Winchmore Hill attracted the greatest number of members. The area visited has been on an average within sixteen miles round London, but the distances were very variable, Ware, Virginia Water, Effingham and Boxhill, being the most distant from, and Richmond and Tottenham the nearest to, London.

On June 15, Waltham Abbey was explored, and a most interesting historical and literary account of the Abbey and neighbourhood read. Whitchurch and Edgware where Handel lived were visited on May 25. Some fine frescoes on the wall of Chaldon Church were inspected on July 13. At this ramble, Professor Boulger, who kindly guided the party from Merstham to Coulsdon, gave a paper on Paris quadrifolia—Herb Paris. Epipactis latifolia var. media, Listera ovata, Lactuca muralis, Campanula Trachelium, Silene cucubalus, Fumaria officinalis and others were found. At Oxshott, both Drosera longifolia and D. rotundifolia were found, also Cuscuta parasitic on heather, Eriophorum angustifolium, Scutellaria minor, Hypericum elodes and others. Some fine dragon-flies (local ones) were seen. Sympetrum Scoticum, Enallagma Cyathigerum, Pyrrhosoma Tenellum, Æschna grandis and Æ. cyanea, and the clouded yellow butterfly (Colias Edusa). At Wisley were found the Drosera, Ruscus aculeatus, Limosella aquatica, Littorella lacustris, Asplenium Ruta-muraria, &c. Here were found the dragon-flies Lestes Sponsa, and Æschna grandis, and the convolvulus moth, Sphinx convolvuli. In one of the rambles, Whitton Park was visited, and the fine exotic trees and shrubs that were planted there upwards of one hundred years ago were inspected.

In conclusion, Mr. Gladstone's postcard to the editor of the *Footpath* on the subject of Natural History was quoted, and the hope expressed that the Field Club of the Selborne Society had been able to contribute a little to a wider knowledge, at any rate, of some branches of Natural History.

E. J. Temple, *Hon. Sec. Field Club.*
Edward A. Martin, *Hon. Sec. Magazine and Leaflet Committee.*

Nature Notes:
The Selborne Society's Magazine.

No. 72. DECEMBER, 1895. Vol. VI.

AN EPISCOPAL SELBORNIAN.

NO truer Selbornian could there be than the late Bishop of Chichester. He has gone from us at ninety-three, to the last full of keen and happy life, and young to the end, because constant touch with Nature ever renewed his youth. Of whom else could it be said that regularly in April, up to this very year in which he died, he could hear for himself, and discover with unaided ears, the earliest little "chink" of Gilbert White's first ocean runner, the chiff-chaff—not much louder than the clink of a shilling and half-a-crown—and mark it as the token of spring? And this was not a final accession of the power of hearing, for when he was nearly eighty-nine he wrote from Chichester, October 17, 1890:—"I heard our white owl this evening, to my content, for I feared the bird had been shot."

But the same mind was still carrying in its wide grasp the earliest remembrances of the furthest horizon of youth—natural history notes, specially on birds—made before Waterloo, and not long after Trafalgar. One of the Bishop's favourite birds was the kingfisher. He remembered, as a Hampshire boy, at Goodworth Clatford, how he had set a small glass globe filled with goldfish in the open air, for the health of the captive fish, near a stream in the garden, and that kingfishers bred there, and that as a boy he had watched the young kingfishers fly over and fish, and fret the water, not quite able to swallow the fish. He also remembered his father, Rev. Richard Durnford, teaching William Howley—then a Fellow of Winchester College, afterwards the Archbishop of Canterbury—who crowned our Queen—how to fish with a worm.

It may be that the nearness of Goodworth Clatford, Hants,

to Abbots Ann, where a nephew of Gilbert White resided, and the tie of Magdalen College, Oxford (of which Bishop Durnford was a Fellow) to Selborne as landowners, were aiding motives in the Bishop's love of Gilbert White's *Selborne*, which he commended as chairman of the first meeting of the Rother Branch of the Selborne Society at Midhurst, August 14, 1888, as a book, once read, the friend of a lifetime. The meeting was held at the Midhurst Police-court, and the Bishop humorously wished that he had all spoilers of birds and flowers in the neighbourhood, and in default of them, the unhappy Selborne Society's agent, who ought to have "run them in"—at that very bar. He told us how in Lancashire the habitat of the lady's slipper (*Cypripedium Calceolus*) had been divulged in the newspapers, and how one vandal took its flowers and uprooted it, that he might have the selfish glory of having the last specimen. He also told us of Bishop Wilberforce coming out of his own woods at Lavington, and meeting a wastrel (one of the pestilent robbers of plants) with a wallet, the contents of which—rare ferns and flowers—he made the culprit shoot out at his feet. The Bishop told him he knew whence every single specimen had come, and that he should go and put them back, or be prosecuted as a trespasser.

The gem of an old palatial garden surrounded by the venerable city walls, a treasure home of noble trees, is to be seen at Chichester. Here the white-throats, chiff-chaffs, water-wagtails, flycatchers, and sometimes a yaffle or green woodpecker, had a revel of it. Any wild bird would be welcome, save the hawfinch, deadly to pease. One of the Bishop's delights was the missel-thrush—he admired its stately walk "like Agag's," and the quick dexterity with which it taught its young to feed; but the favourite cat was a "terrible fowler." In 1887, when the missel-thrush was breeding in one of the trees in the palace gardens, "to circumvent Master Pussy" the Bishop covered the stem of the tree in which the nest was with butcher's broom, set bristles downwards, for a foot or two from the ground, like a portcullis for the "Norman Gizer," as this bird is called in Oxfordshire. This was his own invention, and answered famously: the young brood got away safely. From a very early time in his life the Bishop had observed that there are only a certain set average number of robins in a place, and reasoned to the fact, since noticed, that the young birds expel their elders. He went once in answer to a telegram, to see an unique Sussex ruddy sheldrake mounted at Pratt's, Brighton. What pleased the Bishop most was the innocence of a little girl, who came in with an empty cage, to buy a living bird, the birds in this shop window having every appearance to the child of being still alive.

For some years the Bishop received a yearly spring tribute of morels, of which he was very fond. There were none in 1893. A Selborne shepherd, named James Hewitt, came to the rescue, in 1894, producing a champion morel that beat those sent from

East Sussex, and squared the balance. It was two years' rent in one. The Bishop wrote, April 18, 1894 :—" O terque quaterque beatus—the shepherd that found so gigantic a morel! I am bound to say, after due hearty and experimental proof, that the fungus was not quite so 'sapid' as some smaller congeners sent to me from our southern hills, but he was abundantly good, and approved of by connoisseurs. This heavenly rain has, I trust, set all your birds free, your grass a-growing, and made your hedges vocal. I have not heard the nightingale, but she has been heard here, and at Clapham, near Worthing; nor can I see a swallow. I shall try to-day to go in quest of the St. George's mushroom—it ought to be now seen, and is worth seeking and eating."

In 1894, near Cadenabbia, on the Italian lakes, one of the Bishop's party observed that an eagle—most probably a rough-legged buzzard—had taken up a serpent in his beak, and carried it off to the mountains. The Bishop applied his telescope and saw the whole transaction, exclaiming, as the eagle took the serpent down gingerly, " He swallowed him up like maccaroni!"

In 1892, at the Conference at Chichester, the Bishop, then ninety years of age, gave a most excellent address on cottage gardens, and their proper sort of fruit; at the same time making the suggestion that the County Councils might help to sell fruit —plentiful in some parts of their districts—in the other parts, where it was scarce; and apologising for enlarging on the matter of gardens :—" the subject was too tempting." And in this very year he wrote :—

" Have you seen a notice that the County Council have approached the proper authority to effect the preservation and protection of owls in Oxfordshire? Why should not our County Council (Sussex) be moved to do the same thing for owls, white and brown, and why not include other birds that need protection—kingfishers, for example? A lady told me to-day that last night she observed quite late a white owl sitting on the top of the porch outside the rectory (Selsey). The building hard by was clothed with ivy. Presently she heard a great flutter among the sparrows nesting there; the owl had flown into their abode, and no doubt selected a sparrow or two for supper. The owl does the same for starlings on their perch and for pigeons in our cathedral. I do not know whether he takes jackdaws." The last word of the last of a series of letters, full of guidance in the best sense, as well as of natural history, is dated June 14, 1895, three months before his departure :—" Do the nightingales, when they have ceased to sing, croak like hoarse frogs? I think they do."

H. D. GORDON.

The excellent portrait which stands as frontispiece to our volume is reproduced by permission of Messrs. Fry of Brighton.

BATS.

THE following observations on the common bat and the long-eared bat are collected from notes that I have occasionally set down, on the habits of about a dozen bats that I have kept at various times.

The longest time that any one of my bats has lived is about eight months. One caught in September, 1891, lived until April 23rd of the following year. I have had very few opportunities of observing their habits during the summer months.

During the spring of 1878, when I was at school, I kept a diary, in which I noted the first appearance of flowers, birds, &c., and such like events of the natural year. I find in it a record of bats caught during the first week of June. I remember that with brown paper we smoked them out of a hole in the brickwork above the hall door, where the beam of the porch roof runs into the wall. As they flew out we caught them with butterfly nets in the porch. I think we must have caught eight or ten in that way. I had four for my share. We fed them on flies, which some of the bats took readily from our fingers, others we could not induce to feed.

BIRTH.—My diary records the birth of a bat on the 11th of June, of another on the 13th; the death of one of these on the 18th, and of two bats, presumably the mothers, on the 19th and 20th.

Here the entries cease. But I recollect that most of the bats gave birth to young—never more than one; that none of the mothers paid any attention to their offspring, but left them hanging head downwards on the sticks that we had put in the box for perches; that in spite of our efforts to feed them with milk on a feather, all the young bats died within two or three days of their birth, and that the mothers did not live for more than a week or fortnight afterwards. I made a drawing of one of the bats on the day of its birth. It is about an inch from foot to head. It hangs in much the same position as a full grown bat (apparently by one foot only); the head is large, the wings quite small and feeble; the thumb hook very large in proportion to the wing. From the fact that the bats lived some days after they were born I conclude that they were not born prematurely. If that were so, it would seem, from the feebleness of its wings, that a long time must elapse before the young bat is able to fly. Whether the mother suckles her young until it is able to fend for itself, or whether, after it is weaned, she catches flies and feeds it, is a point on which I have not been able to gather any information.

Of my four bats one, a male I think, survived, and after several weeks made its escape. Some of these bats would eat blackbeetles; but none of the bats that I have kept since would touch them.

At different times at school I kept two long-eared bats, but I have no recollection of any characteristics of theirs that I have not observed more carefully since.

I kept no more bats till August, 1890. Since then till July, 1894, I have had at different times six common bats and two long-eared bats. I have kept a very careful record of their lives, from which record I now write down those circumstances that I think may interest others besides myself. With one exception, all these bats were caught either at Staverton or at Dartington near Totnes, during the months of August and September. One caught itself on the fly when my father was fishing in the evening. Most of them flew into the house at night through the open windows.

Flight.—As soon as the window was closed the bat would never attempt to escape by the way it came in. I have never known a bat fly against a window or against any obstacle, except once in the case of a bat that had been weak and ill for some time, and that, by scrambling about the box in which it was kept, had worn the web from the fingertips of its wings. In attempting to fly it knocked itself against the window twice and also against the furniture in the room. It died shortly afterwards. A long-eared bat that came into the room by a door that opened directly into the garden, flew back—on the door being closed—to the lintel—under which, no doubt, a draught came in—and, after hovering there for a while, dropped to the key-hole and flew backwards and forwards in front of it. A common bat that I had had for several weeks I lost through neglecting to notice that one of the windows was an inch or two open. The bat flew to the upper sash bar of the lower window, and slipped out between the panes. I do not think that light or darkness makes any difference to their flight. I have let them fly in a room by daylight and also at night, with lamps and gas burning. They have never gone dangerously near the flame.

I have seldom had any difficulty in inducing my bats to feed. I have often been able to get them to feed from my hand on the day on which they were caught, and almost always by the next day.

Food.—I fed them at first on flies, moths and grasshoppers; sometimes feeding them from my fingers, sometimes putting the moths, &c., into their box and letting them hunt for them. There seemed to be no limit to the number that they would eat. I put twenty grasshoppers into the box with the long-eared bat, one night; only the legs remained in the morning. I generally gave them their water on a paint brush.

Towards the end of September it became very difficult to provide sufficient food. It fortunately occurred to me that they might eat meal worms. The bats took to these readily, and I think prefer them to any other kind of food. Since then I have fed them almost exclusively on meal worms, any number of which can be kept without trouble in bran, meal, or oats.

HABIT.—The two characteristics in which bats appear to me to differ most conspicuously from any other creatures with which I am acquainted are, first, the readiness with which, on being captured, they will adopt an entirely new method of life; and, second, the speed with which the new habits that they individually adopt harden into second nature. So far to tame a bat that it will lie in your hand and take food from your fingers is generally the task of a few hours, at most of a few days. I do not think they recognize human beings sufficiently to have any fear of them.

Their individuality of habit I can best illustrate by extracts from the notes I made at various times.

Of the bat caught on the fishing line (August 1890) I have noted, "We kept the bat in a cardboard box and fed it with flies, moths and grasshoppers. These we put into the box alive through a small hole. The bat soon learned where they came from, and used to push its snout into the hole when hungry. It was most excited over moths, and there was a great tumult inside the box whenever a large moth was put in."

We caught two more bats the same autumn. "From September we fed the bats on meal worms, which they grew so fond of that after a while they refused blue-bottles. The first bat (which we could always distinguish by the scar left by the hook) was much cleverer than the others in pursuing meal worms. We would put several worms into the box and the first bat would hunt systematically for them, feeling along the edges with its snout, but it soon came to the conclusion that corners were the most likely places, and used to run from one corner to the other. None of the bats ever seemed able to see a meal worm however close it crawled to them, nor did they turn to catch it if it crawled over or under them. When they touched it with the snout they understood and grabbed it eagerly. Neither of the other bats ever attempted to hunt the worms. They ran about with their snouts up waiting to be fed. They understood that meal worms were to be found at the tips of fingers, so, if I put my finger down on a worm at the bottom of the box, the bat would come and touch my finger with its snout, and then feel down till it came to the worm."

Of two bats that I kept in 1891-2 I have noted:—"One of the bats will never find a meal worm for itself. I have seen it after it had not been fed for five days, and had waked up very hungry, scrambling round the box, treading on worms that I had put in, but keeping its head as high up as it could. The other bat, though just as ready to feed from my fingers, would always hunt for itself if put in the box. This bat was evidently the stronger. It kept its coat much cleaner and eat quicker."

SLEEP.—It was my custom to feed the bats at night, generally about nine o'clock. In the summer months they would always be awake and eager for their food. But in October and November they were generally asleep, and needed to wake themselves

before they could eat. This waking would sometimes take as long as a quarter of an hour. I have observed the process carefully; it is always the same. The bat when thoroughly asleep is cold, dead cold to the touch. If I then took it in my hand it would not attempt to move about or seek for food, but lie quite still. On putting it to my ear I could hear a throbbing begin, at first very slowly and not very regularly, more than a second between the beats. Gradually the throbbing became quicker and quicker until it was impossible to count the beats, at the same time the warmth of the body was increasing very rapidly, and the bat quivering visibly. At last the throbbing becomes a continuous whirr, not unlike the purring of a cat, and the body feels quite hot to the hand. Then, rather suddenly, the throbbing quiets down like water coming to the boil, it slows somewhat, and becomes almost inaudible. The bat coughs or sneezes, chatters a little with its teeth, and begins to move about expecting to be fed.

It would be interesting to know whether this throbbing is the beating of the heart, or some other muscular action.

HIBERNATION.—The three bats of 1890 I set to hibernate on the 25th of November. I took them into an unoccupied room, where there would, as a rule, be no fire or gas burning. The weather shortly turned very cold and the winter was severe; they did not seem to go very sound asleep; I often found that they had changed their position in the box. I gave them no food. The long frost broke on the 21st of January; on the 24th I took the bats into the sitting-room. I found that two of them were dead. Both were hanging head downwards, in the same position as if alive. Of one, the points of the wings and of the ears were withered; of the other, only the points of the wings.

I warmed the living bat in my hand, and gave it part of a mealworm, which it eat sleepily. I then gave it some water to drink, and put it back into the box. After a while it began to move about; so I took it out and offered it another worm, which it refused, but drank a lot of water. When put back it began to clean itself and stretched out each wing. Later in the evening it began to run about vigorously, so I gave it three mealworms, which it eat readily, and some more water. About midnight the bat was again restless; so I gave it one more worm, a very large one. When I went to bed the bat was still at its toilet, paying special attention to the points of its wings.

Next evening I tried whether the bat had at all lost its power of flight during its hibernation. The first flight it went once round the room and settled on a curtain; the second flight four or five times round. The third flight it kept up so long that I grew tired of waiting for it to settle. The bat appeared to be perfectly strong; its fur was in good condition, and it fed well. It lived till February 17th, when it was found dead on the bottom of the box. I could not discover the cause of its death.

Next winter I did not allow my two bats to hibernate for more than a week at a time. On being waked after a few days' sleep, they were always very thirsty. One of them lived till April 23rd. The other had died from injury that it had accidentally received.

Cleanliness.—I have carefully observed a bat cleaning itself. It hangs by one foot, and with the other washes its face, constantly putting its foot into its mouth. With the mouth it pays attention to the whole edge of the wing, specially to the thumb and first fingers, also to the tail. I have not seen it make any use of its thumb in cleaning itself.

Affection.—During the months in which I have had more than one bat, *i.e.*, from August to December, the bats appear to be absolutely indifferent to each other. They scold and chatter a little on going to roost—about corner places, I fancy. Two of my bats learned to snatch worms from others when they heard them crunching their food.

Revenge.—I have seen a bat that had been robbed turn and bite the thief; and on one other occasion I have noticed an action that looked like revenge, but they never fight.

Fear.—Though bats do not seem to have any fear of human beings, I have seen one evidently terrified by the sound made by turning over the leaves of a book.

Cry.—Bats seem to have at least two cries. First, the scolding "tchee-tchee," which can be heard by any ears; and second, the high note that is above the range of some men's hearing. The only time I have heard this cry used in captivity was by a female, long-eared bat sent to me last year, on April 12th. I heard the cry on the first two or three evenings after its arrival, but never afterwards.

Pain.—I do not think bats use any cry to express pain. One of my bats was, as I have said, accidentally caught by a fishing line. The hook was fixed in the right pectoral muscle, and in order to remove it, it was necessary to push the point of the hook out through the skin, cut off the barb, and withdraw the rest of the hook. The bat made no sound during the whole operation. I have noticed the same characteristic on another occasion.

Sight.—Common bats appear to me to be practically blind, not only in the light but also in the dusk. They could never see the mealworms with which I fed them, or the paint brush with which I gave them water, until it was within one-third of an inch of their snouts.

Hearing.—I am not sure that their hearing is very acute. They have failed to recognise the sound of mealworms crawling on the floor of the box—a sound which I could hear distinctly. The hearing of long-eared bats is evidently very sharp. I think they see better, too. Those that I have kept have been in every way more interesting and intelligent than the common bat.

Death.—My brother, Dr. Fred. Batten, has examined most

of my bats after their death. In the case of the two that died during hibernation, it was found that the spleen was very large. In the bat that died from injury, December 11th, and that had not been allowed to hibernate, the spleen was small. In a long-eared bat that died suddenly, July 1st, and in a common bat that died April 23rd, the spleen was so small that it escaped observation. The last-mentioned bat was ill for three weeks. After its death, it was found that almost the whole intestine was full of small black bodies, which, examined under the microscope, proved to be flukes. It would be interesting to know what may have been the intermediate host. With the exception of one bluebottle, the bat had had no other food than mealworms for months past.

JOHN D. BATTEN.

15, *Airlie Gardens, Campden Hill, W.*

AN EXPOSTULATION AND A REPLY.

[On receipt of the following communication, from a lady, we felt that it could only be adequately dealt with by one of her own sex, so we sent it to Mrs. Phillips, of the Society for the Protection of Birds, who kindly forwarded the accompanying reply. We can assure "M. T." that we have no intention of desisting from what she calls "such abuse" until those who give cause for censure have ceased to do so, and that, we fear, will not be just yet.—ED. *N.N.*]

ON page 207 I find in a paragraph headed "Very Womanly" these words: "It is women without thought for anything but pleasure and vanity who are mainly responsible for the desolation that is slowly creeping over the whole earth." I think it is very unjust to lay most of the blame on women, and I am surprised at NATURE NOTES continuing so persistently to print such abuse. This attack, too, is rather confuted by a paragraph headed "Destruction of Moles," and by another headed, "A Bad Example" (p. 217); neither of which point to women being "mainly responsible, &c." As to the other question in "Very Womanly," if the birds are shot for food, the chief thing to be considered is whether they are killed in the most humane fashion, not whether they are shot by a man or a woman; but, on the other hand, if they are shot for sport, I suppose the writer of "Very Womanly" could not but own that there are more men than women sportsmen, so that would hardly make women "mainly responsible, &c.," as the writer could not contend that the birds shot for sport are really shot because the feathers are wanted for ladies' hats. All this abuse is especially out of place when it was shown by the numbers of imitation osprey feathers that were worn, how ready women were to have any substitute, however stiff and ugly, rather than wear the real thing, which was procured (by men) in such a cruel manner. M. T.

The writer who expostulates against the persistence of NATURE NOTES in regarding women as mainly responsible for "the desolation that is slowly creeping over the whole earth" does not attempt to deny the extent of the evil occasioned by the destruction of birds for women's head gear and "trimmings." It matters little to birds or bird-lovers, whether the men who kill and sell them, or the women who buy and wear them, are most to blame; the fact remains that in this case the receiver is worse than the thief.

It is women who create the demand, it is women who supply the money for the guns and appliances of the plume-hunters who are even now taking orders for the exploitation of such heronries as yet remain—for the egrets, and for the hunting down of the birds of paradise wherever they can still be found in the next nesting season, where in their brightest plumage they will die in the nest sooner than forsake their fledgelings.

The founders of the Selborne Society, and of the more recent Society for the Protection of Birds, believed that if the cruel cost at which the feathers were alone procurable could be thoroughly exposed, the fashion would be forthwith and for ever abandoned. In this they have been sorely disappointed.

The "Bird of Paradise Egret" is the fashionable head decoration, largely advertised, and to be seen in all public places; streets, charity-bazaars, and even churches. There are no doubt many imitations, and it would almost appear that the milliners sell the "mixed plumes" as real or artificial, according to the wish of the buyer. It is often not easy to distinguish the one from the other, because the lovely plumes are rarely worn in a natural state, but are bleached, dyed black, or coloured, stiffened and bunched up beyond recognition. "M. T.", however, declares that the use of artificial plumes proves that women are ready to accept any substitute, however stiff and ugly, rather than "wear the real thing procured (by men) in such a cruel manner."

But why this dismal alternative? Cannot the deft fingers of plumassiers and milliners concoct from the feathers of birds killed for food, from lace and ribbon, and flowers, decorations in every sense more becoming even than the "real thing" as now worn, or its imitations? Then, too, there are the plumes of the ostriches. These birds are reared and preserved for their feathers, which may be supplied to almost any extent, without cruelty, provided only they be taken at the proper time, in the proper manner. The slaughter of moles, however ill-judged and cruel, is quite irrelevant to the present question, and as to the destruction of butterflies by school boys, this can scarcely be reproved by mothers or sisters who have not first removed the beam from their own eye—that is, the aigrette from their bonnet.

E. PHILLIPS.

Vaughan House, Croydon.

CHRISTMAS BOXES.

THE custom of making presents at Christmas is one which younger folk, who have not yet learnt the superior blessedness of giving to receiving, would not willingly let die, nor are older folk likely to be allowed to pass it by without due observance. "What to give" is the next consideration, and we propose to offer our readers some suggestions under that head.

There are many reasons why we place Mrs. Brightwen's new book at the head of our list. In manner, in matter, in illustrations, and in price, it has every claim to that position. The author's name is a bye-word among Selbornians, and a synonym for all that is bright and kindly. Among the *Inmates of my House and Garden* (Unwin, 3s. 6d.), readers of NATURE NOTES will find a certain number of old friends—"Asnapper, the Owl," for example, with his portrait, which by the courtesy of the publisher we are enabled to reproduce, and the various household dwellers about whom Mrs. Brightwen talked so pleasantly at the annual meeting of the Selborne Society.* The title "A Fairy Story," might lead the reader to surmise that the author had for once deserted the realms of fact for those

of fancy, but this fairy "is a tiny white-throat, a sleek, delicate, grey-coloured bird, with a white breast; lovely in form, swift in flight, and of a most engaging disposition." Fairy made her appearance one morning at the window, "a tiny half-fledged bird, sitting on the ground, looking pitifully up." "Of course, such a poor little motherless waif must be cared for," and the result of the care was the addition to an already sufficiently varied *ménage* of a new and most interesting pet. The history of Mungo, the ichneumon whose early life was chronicled in *More About Wild Nature*, is brought up to date, and lemurs, doves, squirrels, tortoises, bees and wasps, cork moths, death-watches, cheese mites, and other matters, down to the making of pot-pourri, go to the making up of a volume which can give nothing but pleasure, and must enkindle that interest in Nature which it is one of the objects of the Selborne Society to promote. We must not omit to say that the numerous and charming illustrations by Mr. Theo. Carreras add to the attractiveness of the book.

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* See p. 146.

The beautiful edition of White's *Selborne*, for which we are indebted to Messrs. Macmillan (price 10s.), claims the next place. The book itself has long ceased to need commendation; but this reprint, filled as it is with illustrations of Selborne and of its birds and beasts, will introduce the work to quarters where it is yet unknown. We predicate this with the more certainty as the edition was primarily prepared for the American market, and thus fittingly has an introduction from the pen of the one man best qualified to write it, Mr. John Burroughs, who visited Selborne in 1882. This introduction is short, but, like all that Mr. Burroughs writes, it is *true*. "When one reads the writers of our own day upon rural England and the wild life there, he finds that they have not the charm of the Selborne naturalist; mainly, I think, because they go out with deliberate intent to write up Nature. They choose their theme, the theme does not choose them. They love the birds and the flowers for the literary effects they can produce out of them." There is much truth in this, and it comes from one who practises what he preaches, for Mr. Burroughs's own books have, perhaps, more than any others of the kind, the sobriety and quiet interest which is so eminently characteristic of *Selborne*. Mr. Clifton Johnson's illustrations are so beautiful that they almost—but not quite—reconcile us to the aggressively shiny paper which is the one defect of the book.

Country Pastimes for Boys, by P. Anderson Graham (Longmans, 6s.) has been out for some few months; it appeared, if we mistake not, in time to be useful during the summer holidays. But it is eminently a book for a Christ-

Meadow Pipit's Nest.

mas box, and parents and guardians, should they find it has as yet no place on the playroom shelf, are recommended to remedy the deficiency as soon as possible. Nearly two hundred out of the four hundred and fifty pages are

devoted to birds, and half of them to bird's-nesting. When we read Mr. Graham's opening sentence — "This is the healthiest, pleasantest and most interesting of all open-air recreations," we trembled to think what Miss Edith Carrington would say; but the author goes on at once "to enumerate a few of the more flagrant offences" of which boys are capable, and puts the case so clearly and with such an absence of exaggeration that no sensible boy can fail to avoid them. There are charming illustrations, and a great number of them—one to every two pages—not the old half-worn-out cuts which used to be thought good enough for books of the kind, nor such as have done duty so often that we are tired of the sight of them, but clear, useful pictures, showing the nests among their natural surroundings. Then we come to bird pets and birds for taming, whence by an easy transition to poultry, and so on to "miscellaneous pets," rabbits, squirrels, "mice, and rats, and such small deer," and then fishing and fishes. There is a delightful chapter on "Rambling," which reminds one of Mrs. Barbauld's "Eyes and no Eyes," except that it is infinitely more interesting, and contains nothing so startling as the finding of mistletoe on an oak. The chapters on "Autumn Berries" and "Poisonous Plants" do not please us so much—some of the cuts are old friends, and others are very poor. It seems to us that the wild flowers should either have been omitted altogether or treated at greater length. To say sooth, we do not think Mr. Graham is at home in this part of his subject, otherwise he would not have given us a cut of a *Helleborus* to illustrate the white hellebore, which is, as he truly says, allied to meadow saffron. Some chapters on open-air games, where the author is once more at home, bring this delightful book to a close.

Messrs. Cassell give us an attractive handbook of zoology in their *Popular History of Animals for Young People* (7s. 6d.), from the pen of Mr. Henry Scherren. Beginning with a chapter on classification, we descend the scale from man down to "the oldest and simplest animals," of which *Euglena*, *Volvox* and *Amœba* are taken as types. Mr. Scherren has succeeded in carrying out his object—"to give a short account of the animal kingdom in clear and simple language"—and by the aid of well-selected anecdotes and a somewhat miscellaneous but numerous selection of illustrations, has produced a book admirably adapted for interesting intelligent children. In characterizing the pictures as miscellaneous we must not be understood as speaking disparagingly of them as a whole; the majority are excellent, but some might be spared without detracting from the appearance of the book. A word must be said in praise of the pretty coloured plates, printed, we regret to see, in Germany, as we should suspect the text also of being, but that no announcement to that effect is made in the volume. These, to the number of nineteen, are coloured with much care; each contains a large number of figures, greatly reduced, but clear and attractive. A good index adds to the usefulness of the book.

Another excellent specimen of foreign workmanship—this time bearing the words "printed in Bavaria" on the title—comes to us in the very handsome quarto volume on *British and European Butterflies and Moths* (*Macrolepidoptera*), by Messrs. A. W. Kappel and W. Egmont Kirby (Nister, 25s.). Colour printing has lately been making rapid advances, but we have never seen more beautiful specimens than are presented by the thirty-eight plates with which this book is adorned; they convey not only the colour but the texture of the originals. The names of the authors are sufficient guarantee that the descriptions are carefully done, though, considering the title, it is a little startling to be told in the preface that "space has not permitted them to include all the European species, although most of those inhabiting central Europe have been dealt with, and nearly all those of the British Isles will be found described or figured." The descriptions, of course, include notes on distribution, food-plants, and the like. When first we opened the volume at p. 89, our eye fell on the statement that the dotted clay "lives on low plants, especially monkshood (*Atropa belladonna*)," and this made us apprehensive lest slips of this kind should be of frequent occurrence. We have, therefore, tested the book in numerous cases, but have found no similar blunder. Among the many reasons which prompt the fruitless wish to be young again, the

naturalist will place the number of attractive introductions to science which are offered on every side to the younger generations of observers. The price of this volume, indeed, is somewhat beyond that furnished by juvenile purses, but it is to be hoped that many a youthful entomologist will have his Christmas made bright by the present of this beautiful book. Our only regret is that the vile practice of wire stitching should have been employed; anyone who knows how this pernicious practice spoils and disfigures a book in the course of a few years will share our feelings on this matter.

The closing sentence of *The Second Jungle Book* (Macmillan, 6s.) is the only one which will cause dissatisfaction: "This is the last of the Mowgli stories," yet we do not blame Mr. Rudyard Kipling for thus ending this delightful series; continuations are wont to be somewhat unsuccessful, and when prolonged are almost sure to be so. But this remark does not apply to this second batch of jungle stories—inferior to the preceding volume only in so far as they are less of a novelty than the first. In one of these new tales, "The Miracle of Purun Bhagat," we lose sight of Mowgli and his friends, and another takes us north among the Esquimaux, and can hardly be classed as a jungle story. But all are

good, and very good, and Mr. Lockwood Kipling's illustrations, or as he prefers to call them, "decorations" (of which we are enabled to give an example), are as good as the text. We see that the original *Jungle Book* is in its twenty-second thousand, and we imagine this second volume will not be long before it reaches a similar figure.

When Mr. Somerset's book, *The Land of the Muskeg* (Heinemann, 14s. net), was announced, we wonder how many knew what a muskeg was. The Editor of NATURE NOTES confesses that he did not, and in case any of his readers should be equally ignorant, he extracts the following description: "A muskeg is a particularly abominable kind of swamp which at first sight seems no very terrible affair. Green spongy moss covers the ground, while here and there lie small pools of clear water. One realizes that the moss is soft and wet, and that the travelling may be heavy, but nothing more. But no sooner have you set foot upon its treacherous surface than the thing becomes more serious. The beautiful green moss seems to catch your foot in a vice, and to rise swiftly towards you. When a man faints he sometimes imagines that the ground has risen up and struck him [we have read of this apparent phenomenon occurring under other conditions, but no matter]; this is exactly the sensation of him who walks in a muskeg. You feel that you must quickly take another step before it is too late, and so you plod on, and soon you tire. In point of fact there is little danger of being sucked down, but the place has a most melancholy look. Nothing else on earth can be so vividly green and yet so utterly desolate."

The route followed by Mr. Somerset and his companion, Mr. A. H. Pollen, lies through Athabasca and British Columbia, in the land of the Hudson's Bay Company. They arrived at Edmonton, in the North of Athabasca, on June 7, 1893, and in the course of their travels made the acquaintance of various tribes of Indians, Cree, Carrier, Beaver, Chinook, and others. The travellers speak in the warmest terms of the French missionary priests, from whom they received

"personal kindliness and consideration that it will be a lasting pleasure to remember." One of these, Père Morice, who works among the Carriers, is spoken of with enthusiasm. This "prince of missionaries," as Mr. Somerset styles him, "has invented a most ingenious syllabary, which is easily learnt, so that Indians who have no idea what writing is, have been known to learn to read and write this language in perfect correctness after two or three days' instruction." In this syllabary they have books and a monthly review, Père Morice being his own editor, compositor, and printer. The book is full of interesting matter, told in a simple unaffected (sometimes even colloquial) way which makes it very pleasant reading. There are excellent maps and a large number of small and less excellent, but still useful illustrations.

SHORT NOTICES OF BOOKS.

London Birds and Beasts, by J. T. Tristram-Valentine, F.L.S., F.Z.S., with a preface by Frank E. Beddard, F.R.S., pp. xii., 319. (London, Horace Cox, 1895). Price 3s. 6d.

The title of this work is somewhat misleading, and might be more so if the reader were told that "beasts" included insects! In point of fact the book is divided into two parts; the first treats of various creatures in captivity in London (at the Zoological Gardens), and the second of the wild birds of London. There are also gathered together, in an appendix, some varied studies of ornithology, ancient books, &c. The articles, which chiefly have reference to new arrivals at the Gardens, were published from time to time in the *Saturday Review*, and would have been better for a little paring down before they appeared in book form. The introductory padding, which is excellent in a newspaper article, becomes a little tiresome when we read the articles as continuous chapters; a point which will probably occur to those who, as Mr. Beddard hopes, may carry the volume with them to the Gardens and study it with the animals before them. Its use as a guide at the present day is rather discounted by the fact that some of the papers are a little out of date, the author having been dead, we believe, about two years. But all the articles on birds, beasts and insects at the Gardens will well repay perusal, and those who love quaint old natural history books (a love of which was another passion of the author's life, as we are told in Mr. Gordon Wigan's Introduction) will find much to interest them. The chapters on wild birds in London strike us as rather slight, and hardly worthy of the rest of the book. Commenting in 1891, as he could hardly fail to do, on the enormous increase of the wood pigeons in the London parks, the author hazards no guess as to the cause. To us the curious point about it is the suddenness and rapidity of the increase, for although we know that a great increase in the numbers of this species has taken place in some parts of Britain, yet we are not aware of any such in the immediate neighbourhood of London. Why should not the increase have begun at an earlier date? We take it that the parks do not afford a much safer asylum now than they did ten years ago. It must be long since the birds-nesting boy had a free hand there, still longer since one could carry a gun, or wait for pigeons, under the ornamental trees. The increase is curious, and its cause we have yet to learn. It is not only in London, of the great towns of Europe, that we find wood pigeons. We have seen them among the trees in the little "Park" at Brussels, and in the Jardin d'Acclimatation in Paris. Here, practically in the Bois de Boulogne, we should expect many birds to come, but the very tamest wood pigeons we ever saw were in the old Jardin des Plantes, in a thickly populated, busy, and rather sordid part of the city.

O. V. A.

THE handsome volume devoted to *Whittingham Vale, Northumberland: its History, Traditions, and Folklore* (Newcastle, Redpath), is the outcome, so a modest note accompanying our copy informs us, of "the leisure hours' employment of two village tradesmen." We heartily congratulate the Messrs. Dixon—

one of whom is responsible for the letterpress, the other for the illustrations, of this excellent example of a local history—upon the good use they have made of their time. There are hundreds of men in the country, blessed with abundant leisure, who would do well to follow the example set by these drapers and grocers of Rothbury, and who would not only find in so doing an interest in life for themselves, but would be contributing towards that full and complete history of our land and its inhabitants which some day or other is certain to be called for. We are well aware that we are paying this history a high compliment when we say that it reminds us in its thoroughness of Canon Atkinson's *Moorland Parish*, but the compliment is deserved. The local history from the earliest known periods of each of the parishes in the Vale of Whittingham is exhaustively worked out, and, with the assistance of clergymen and others, the parish registers have been laid under contribution. The chapter devoted to "folklore" sums up the customs and traditions prevalent among the people, and if the term seems extended beyond its usual sense by the inclusion of anecdotes of persons still or quite lately living, it must be remembered that popular tradition is always in the making, and that much of the folklore of the past clustered round certain prominent individuals. The people of Whittingham Vale—and not they only—will derive much enjoyment from this record of their neighbourhood, but the greatest pleasure has deservedly been that of the two compilers, who must, we fear, have felt bereft of an occupation when their volume emerged from the press. We must not omit to mention that an excellent index brings this capital book to a satisfactory conclusion.

We had put by Mr. Donald McDonald's *Sweet-Scented Flowers and Fragrant Leaves* (Sampson Low & Co.) for a longer notice than we are able to give it. Yet perhaps a short paragraph will suit it best, for were we to review the book at length we should be compelled to point out many defects. The subject is a good one, as Mr. William Robinson points out in his introduction, and the historical sketch which follows this is interesting and readable, though we cannot compliment Mr. McDonald on his literary style. But when we come to the "alphabetical list of sweet-smelling plants," which forms the larger portion of the book, we are confronted with a vast number of names, many representing plants which have the very slightest claim to inclusion, and regarding which no information is vouchsafed; while many which ought to find a place are omitted—*e.g.*, the Lady's Bedstraw (*Galium verum*). The numerous misspellings and the phraseology employed seem to show that the author's acquaintance with botanical terminology is very slight; he appears to know little of the plants themselves—*e.g.*, he calls the Birdsfoot Trefoil "a variety of clover;" and his practical knowledge seems often at fault, as when he tells us that the Rocket (*Hesperis matronalis*), so popular in cottage gardens, "is rarely seen outside nursery collections." It would be easy to criticize the book in detail, but it hardly deserves so much attention. We must, however, protest against the misleading statement with which the brief preface concludes. "The illustrations," we are told, "were really an afterthought on the part of the eminent house that is introducing the book to the public: they have been prepared by a first-class firm of horticultural printers, and it is hoped will prove an attraction." No one could gather from this announcement that the figures in question are taken—no doubt by arrangement—from Messrs. Cassell's *Familiar Garden Flowers* and *Familiar Trees*.

Messrs. Bell & Sons send us four of their "Animal Life Readers"—two (*Wild and Tame* and *Dick and His Cat*) at 10d. each, and two (*Old Friends* and *Rover and His Friends*) at 8d. All are edited by Miss Carrington, and all (except *Dick*, which is illustrated by F. M. Cooper) have pictures by Mr. Harrison Weir. The two latter are for juvenile readers, who are supposed to require large type and whose literary acquirements do not extend beyond two syllables; the former are for somewhat older, though still youthful readers. In every respect—binding, printing, pictures, and letterpress—these are attractive little books, and deserve a large sale. The stories are interesting and well told, and there is no attempt to harrow the feelings—a feature which is not always absent from the publications of the Humanitarian League, for which body these books are published. Messrs. Bell also send us another little book by Miss Carrington—*The Dog: its Rights*

and Wrongs. It is not a school book, but is full of useful hints and interesting anecdotes, and is very suitable for elder children, and indeed for all who keep dogs.

Perhaps it is a little late to notice a book called *How to Enjoy a Holiday* (Unicorn Press, 211, Gray's Inn Road, 1s.), in which "Nestor" and "Mentor" give certain hints and suggestions on this subject. There is ample room for such hints, as anyone who has ever mixed in a "Bank Holiday" crowd will allow, but the authors are rather over the heads of "the masses," who, moreover, would probably not take advice, however good, which came to them in the form of literature. The Selborne Society is spoken of with approval, and Miss Atkinson's Barmouth address—to which we gave considerable space in our August number—is quoted. Altogether it is an excellent little book, which would, we think, have stood a better chance of finding a public had it been issued through some recognised publisher.

The Haslemere Natural History Society has issued in pamphlet form (price 6d.) a "Record of Lectures and Addresses" delivered during 1895. These deal with a great variety of subjects, some of which, such as "Our Free Press," seem hardly to come within the scope of the Society. There is a characteristic paper by Mr. Grant Allen on "Swallows and House Martins," and Mr. N. E. Brown contributes an interesting essay on "Our British Wild Flowers."

The *Official Guide to the Norwich Castle Museum* (Jarrold, Norwich) is a wonderful sixpennyworth. It contains nearly two hundred well illustrated pages, devoted for the most part to a description of the excellent collection of birds contained in the Museum. The name of the author, Mr. Thomas Southwell, F.Z.S., is sufficient guarantee that the book is as accurate as it is attractive.

"Consul" was certainly, as the title of the little book about him assures us, a "remarkable Chimpanzee," but why he should also be styled "the Missing Link" we do not quite understand; nor, apparently, does Mr. Frank Roper, the author of his memoirs. Consul was for about a year and a-half one of the attractions of Belle Vue Zoological Gardens, Manchester, and this account of him, which is suitably illustrated, is well worth the sixpence at which it is priced by its publishers, Messrs. Abel & Heywood, of Manchester.

The *Book of British Hawk-Moths, a Popular and Practical Handbook for Lepidopterists*, by W. J. Lucas, B.A. (London, Upcott Gill, 1895, pp. v., 157). Among the numerous books on British butterflies and moths which are continually issuing from the press, the pretty little work before us demands a passing notice. It deals only with the *Sphingidæ*, or typical hawk-moths proper, of which we have but seventeen species in England, and some even of these are scarcely more than occasional visitors. The book is, however, partly extended to its present size by detailed instructions for collecting, preserving, and breeding Lepidoptera, whether specially applicable to the *Sphingidæ* or not. The work is illustrated by numerous woodcuts, and the insects themselves are represented as larvæ, pupa and imago, on page plates or folding plates. These illustrations, though uncoloured, are very characteristic and well executed, though not all of equal merit; in the last plate the name of the two Bee Hawk-moths have been reversed by some accident.

W. F. K.

Mr. Alfred H. Miles is well known as a compiler of readers and reciters, but it is to be regretted that he should have turned his attention to natural history. His *Natural History in Anecdote* (Hutchinson & Co., 3s. 6d.) is a fat work, containing nearly 400 pages of close printing, the appearance of which is as unattractive as the contents. It is difficult to conceive a book with such a title being uninteresting, but Mr. Miles has succeeded in making it so by choosing passages from byegone works of—in many cases—long-forgotten authors. If we except the Rev. J. G. Wood and an occasional reference to Mr. Russell Wallace, we shall find Mr. Miles's authorities date from the earlier of the century. We have Mrs. Bowdich, who died in 1856; Captain Brown; James Hogg, "the Ettrick Shepherd;" some of Jesse's "dog stories;" the *Magazine of Natural History* for 1831; Bishop Stanley, of Norwich; Sir William Jardine; and numerous other contemporary authors: but our living naturalists might never have been born for all that Mr. Miles lets us know about their work. There are extraordinary omissions—the mongoose, for

instance, is not mentioned; and of some of our most interesting birds, *e.g.*, the jackdaw, there is not a single anecdote, only a bald paragraph of ten lines. The idea of the book is a good one; its execution is singularly unsatisfactory, and the hopes expressed in the preface are by no means fulfilled. A book of this kind can only be compiled by a naturalist, and there is no evidence that the compiler has any acquaintance with his subject.

We have received the first volume of *The Animals' Friend* (20, Victoria Street, S.W.), which contains the first sixteen numbers of an unpretending but useful little periodical. The editor, Mr. S. G. Trist, may be congratulated on the number of distinguished contributors he has succeeded in enlisting, many of whose portraits adorn his pages. The numerous illustrations form an attractive feature of the volume. We are somewhat surprised to see our own title "Nature Notes," appropriated for a section of *The Animals' Friend*, more especially as it is followed by the word "copyright," which, however, applies, we presume, not to the title, but to the paper which Miss Carrington is contributing under that heading.

Several other books stand over for notice.

SELBORNIANA.

Sanctuaries.—We have heard a good deal lately of the protection of birds by providing "sanctuaries," or enclosures within which no bird is to be molested in any way whatever. This artificial protection of one great division of the animal kingdom (would not republic or commune be a better term?) must, sooner or later, lead to the protection of others. If we protect the insectivorous birds, naturally the insects will be reduced; and although there are some that can well be spared, there are others whose absence would be a great loss—to many of us a greater loss than the absence of the birds. The birds will not discriminate between useful and harmful insects, nor between the beautiful and the unlovely. The beautiful and harmless insects must, therefore, be protected! Not only are they in need of protection from the birds, but from unscrupulous collectors, who never seem to understand that long, unvarying series of one species in their cabinets is a great waste of living beauty, a great waste of time, gratifying only their selfish sense of possession, and tending more than any other means to bring about the extinction of species once fairly common. I would suggest that entomological and general natural history societies, and the Selborne Society amongst them, should combine to purchase a few acres of freehold ground immediately adjoining an extensive tract of common land, such as the New Forest, Epping Forest, or the the Surrey commons of Esher and Oxshott, or any similar situation, and after planting it with the flora of the adjoining forest land (of course giving prominence to those plants most attractive to the insects it is desired to encourage), use every endeavour to reintroduce species once common in the district, but now scarce, or perhaps extinct. In course of time, should a species become sufficiently common, the system in vogue at Geneva, where "L'Association pour la Protection des Plantes" distributes packets of seeds of local species at a small charge, might be introduced; and the ova, larvæ, or pupæ, but not the perfect insect, might be disposed of to subscribers for a small sum. If a stream of water ran through the grounds so much the more desirable, but in any case a pond would have to be provided for aquatic insects; and should sufficient funds be forthcoming, a glass temperate house could be added for the better care of more delicate species. Botanists could also have an interest in the enclosure, where plants becoming rare, or already extinct in the district, could be cared for, and the seeds disposed of, as in the society mentioned above. It is quite time something more was done in the study of insects than the majority of entomologists have in view—the placing of perfect specimens (and, as before stated, to a most unreasonable extent) in a cabinet. I am quite aware there is a great improvement upon the "collecting" of thirty or forty years ago, that

the life histories are better studied, but I am afraid only too often with the view of getting a perfect specimen of the imago *for the cabinet*. The cabinet is an excellent place for referring to a preserved specimen at a time when that identical species is in another state; but the desire of the lover of nature has got beyond the museum stage, and the want is to see and study the living animal or plant in as wild a condition as possible. By placing the enclosure or "sanctuary" on the border of a large tract of open country, many of the insects reared in safety within might form fresh colonies in the open, and become common where they are now scarce. Of course I need hardly add that no insect, however beautiful, if injurious to other interests, should be introduced. It happens, however, that the greater number of our most beautiful forms are perfectly harmless; the lepidoptera feeding upon wayside weeds; the odonata (dragon flies) upon small troublesome flies and their larvæ; the trichoptera (caddis flies) upon aquatic plants and insects. In the coleoptera most of the "ladybirds" feed upon aphides; in the hymenoptera the bees feed upon the flowers; and some of our most handsome diptera are parasitic upon the wild bees. Such a work as I have suggested is certainly one which should commend itself to every Selbornian, and one which a Society such as ours might take up.

R. MARSHMAN WATTSON.

A Bad Example (p. 217).—Under this heading you allude regretfully to the catching of sixty swallowtails by three schoolboys, and I fully concur in your remarks. Since my schooldays I have ceased to be an entomologist, but my pursuit as a landscape painter naturally takes me to the haunts of butterflies, and I have noticed of late years a decided diminution in the quantity of several species with which I was formerly familiar, and notably the beautiful insect in question. Some years ago it was suggested that it might be possible to acclimatise some exotic species, a proposal to which I ventured to raise the objection that, from a scientific point of view, it would not be desirable to change the habitats of the fauna and flora of different countries. Whilst still entertaining this opinion it occurs to me that as some of our rarer lepidoptera are common on the Continent of Europe, and even in the north of France, it would not be difficult to transport the eggs or the larvæ into this country so as to replenish the remaining stock before they become extinct.

Among the species that occur to me I may mention the swallowtail, including the other species of *Papilio*, now exceedingly rare in this country—known in France under the name of "la flamme,"—the Camberwell Beauty, the Purple Emperor and the Apollo. As these may still be strictly regarded as British insects, there would be no difficulty in finding appropriate food for the larvæ. Our insular position is doubtless the main cause of the partial extinction of many species which, from their exceptional beauty, it would be desirable to recover.

FRANK DILLON.

The *Daily Chronicle* of November 6 thus endorses our remarks:—"The wanton and indiscriminate slaughter by three schoolboys, with whom a writer in the current number of NATURE NOTES claims friendship, of no fewer than sixty specimens of the swallowtail butterfly, will be viewed with indignation by all true Selbornians. Although bred in captivity in considerable numbers, this magnificent insect, like the Camberwell Beauty, which no longer luxuriates amongst the willows of Camberwell, is every year becoming more and more local in its appearances, the fen districts in the eastern counties, and occasionally the Norfolk Broads, being among its few remaining haunts. Well does the Editor of the Selborne Society's Magazine protest against the way in which our rare insects—and may we add birds also to meet the demands of fashion—are being gradually exterminated.

A Question of Spelling.—In his appreciative notice of *A Garden of Pleasure* (p. 214) has the Editor quite sufficiently considered the ways of the "printer's devil," or allowed for his sins? "Serastium" nor "sysirhinchium," were surely never writ by me! and had they been so written, words so uncouth would never have been tolerated by *The Gardeners' Chronicle*, in whose pages the chapter first appeared. As for "saudades," it is Portuguese for that dark puce-coloured garden scabious, commonly known here as ladies' pincushion.

The word means—ah, what does it *not* mean? It cannot be said in English. It expresses all the tender love and longing which a poet would seek to convey in a modiña, and a lover sings under the window of his fair one. As for "cocoa," with all due deference, I hope to be permitted to retain the old-fashioned orthography. "Coco de Mer," the strange nut of the Seychelles, is certainly correct. But why is Skeat's dictionary to be improved upon, or ignored? there I read, "Cocoa—the cocoanut palm tree," and on another page, "Spanish—coco—a bugbear, an ugly mask, &c., hence applied to the Cocoanut on account of the monkey-like face at the base of the nut." I scarce dare to add, that when "coco" nut appears in my grocer's books, I always correct the spelling and put in the "a."

November 6, 1895. E. V. B.

[We print E. V. B.'s expostulation with pleasure, and with a word or two of comment. We know the ways of printers well, but the names we cited were surely seen in proof? and although we are glad our guess at "saudades" proved correct, is it wise to use so unfamiliar a name without adding something to identify it? As to "coco," we venture to quote Dr. Murray's great dictionary even against Professor Skeat's, and the former says: "Coco remained the established spelling in the 18th century till the publication of Johnson's Dictionary, in which the article *coco* was (apparently by some accident, for Johnson in his own writings used *coco*) run together with the article *cocoa* (=*cacao*); this gave currency to a confusion between the two words which still prevails, although careful writers have never ceased to use the correct form *coco*." One result of the confusion is that folk think the coco-palm and the *Theobroma* are one and the same thing, and the use of the term coco-nut helps to correct this. Dr. Murray says that, with the same object in view, *coker-nut* "has long been in commercial use at the port of London to avoid the ambiguity of *cocoa*."—ED. *N.N.*]

NATURAL HISTORY NOTES AND QUERIES.

Gower and its Birds (p. 218).—I think J. U. Voss will be interested to know that for several years a nightingale made its appearance in the garden of the late Mr. S. Benson, and that many of the inhabitants of the peninsula walked miles to hear it sing. I have lived in several parts of England, but I do not know a place where cuckoos were more plentiful. I have often seen two or three on our lawn, and once I was fortunate enough to find an ugly youngster in a hedge-sparrow's nest, near our vicarage gate at Llanrhedian. Gower is indeed "a paradise of bird life," and could furnish a list of birds which I think would surprise many of the readers of NATURE NOTES. I can well remember the appearance of three white starlings, a pair of Cornish choughs, and an Egyptian spoonbill.

Wales Vicarage, Sheffield. GWYN REES.

It may interest J. U. Voss to know that the cuckoo is found in great numbers in a little village close to the sea, lying opposite to the Gower coast in South Wales. As a matter of fact, during the "cuckoo season" it is almost an impossibility to sleep owing to their incessant "cuckooings" all through the night; and I myself have passed many a sleepless night through them. Although a small village it teems with bird-life, and I have seen many birds which are rare in other places—one hoopoe, which was unfortunately shot as a specimen. The night-jar is also there in great numbers, and it was a great delight to me to listen to their peculiar chur-r-r late into the evenings. Several times I heard a night-lark, whose song seems to me exactly like that of the nightingale—it is most exquisite, and one listens enraptured! I should be interested to know whether any of your readers have heard it in many other localities, as the village I am speaking of is the only place where I have heard it. I have only heard the goat-sucker once in this locality (which is about sixteen miles from the village where there are so many), and that was in July last; but as I seldom go out in the evening

it may be that I have missed hearing them, and they may possibly be in this locality also.

Mydrim. A. A. B.

I can endorse Mr. J. U. Voss's statement as to this bird being heard in Wales, north and south, near the sea. My native place, "Bryn y Môr," was exactly opposite Gower, within a mile of the Tower of Llanelly, and the cuckoo came every year to some plantations close to the house. Our Welsh servants were superstitious, and used to say, "We shall keep our place another year," when they heard the bird's note; for they believed that wherever you might be the first time in the season when you heard the cuckoo, there you would certainly be, if living, next year. I also heard it at a relative's place much nearer the sea, at "Killymaenllwyd," which is close to the sea shore, and opposite the "Worms Head," a rock at the extremity of the Gower peninsula, in North Wales, when I lived near Beaumaris, close to the sea shore. Not far from Pen Mon in the island of Anglesea, the cuckoo was a yearly visitor to some of the adjoining woods. I used to hear its note continually, though I never saw the bird there as I saw it in South Wales, or as I see it here, but we are eighteen miles from any sea. The birds fly about the garden, and perch on different trees, uttering the same rather tiresome note; for after a time it becomes tiresome, especially if one has a clever mimic of a grey parrot, who has the "fatal facility" of copying most sounds and voices, and who mocks the cuckoo so correctly when out in his cage under the trees in summer, that I believe he deceives the birds themselves.

Berry Grove House, Liss, Hants. HELEN E. WATNEY.

Vipers Swallowing their Young.—There is a warm controversy raging in the *Field* as to the alleged swallowing of young vipers by their dam, for protection in time of danger, and many letters are appearing on the subject. Mr. Tegetmeier and the "Naturalist" editor, if they be different persons, are incredulous, but profess themselves willing to be convinced. A fortnight ago I wrote to say that I thought it worth while to put on record a piece of evidence which seemed particularly valuable, because the witness had never heard a word on the subject, and did not know that anyone had ever asserted the fact, and told his tale only as a curious experience of his own. This, I added, was the Jesuit, Fr. de Smedt, long a missioner among the Red Indians, and he told the story to me. Riding one day across the prairie, he came to a shallow hollow, at the bottom of which was a large rattlesnake and a number of young ones playing round it. As he advanced his horse made a noise, whereupon the youngsters scuttled off to their mother, who opened her mouth and they disappeared down her throat. Much interested, he reined up and remained perfectly still, and presently first one and then another of the little ones hopped out of the mouth, until they were all again in sight. Then he struck his boot smartly with his riding whip, and again they vanished as before. He repeated the experiment several times, and always with the same result.

This letter I wrote, as I have said, a fortnight ago, but no notice whatever has been taken of it in the two issues which have since appeared, though other letters have been printed on the subject. Can it be the terrible word "Jesuit" which has frightened the editor? If so, the *odium theologicum* has penetrated to regions more remote than I could have imagined. Perhaps the anecdote may be useful for NATURE NOTES.

JOHN GERARD.

Sparrows Again!—Those moralists who are in the habit of holding up Nature to us as a model, in works like *The Busy Bee*, *The Industrious Ant*, &c., must surely find it expedient to ignore the domestic sparrow, for of all birds he seems to me the most immoral *and* the most successful. It needs nothing less than the ingenuity of *man* to circumvent his cunning tricks and unholy practices. If anyone would accuse me of undue warmth, let him first hear how our sparrows not only committed a series of shameless robberies, but very nearly succeeded in giving our entire household blood-poisoning this summer.

In the spring we were much pleased to find that the martins were building under our eaves. There were five pairs of them busily at work, and the nests were nearly finished, when I left home for a few days. On the morning after my return I noticed a long wisp of hay hanging from one of the nests, and peering

over the edge of the nest—could it be? yes, it really was—the head of a *sparrow*. I looked for the martins, but there was not one to be seen. The sparrows had taken comfortable possession of every one of the five nests, having first stuffed them with hay, feathers and all sorts of untidiness. In great wrath I departed in search of a ladder, and before long the nests were cleared out, and ready again for the martins; but alas! they never came back. As for the sparrows, they held an indignation meeting on the housetop, after which they seemed resigned, and we hoped the matter was forgotten. However, some little time afterwards we noticed that our soft water, which collects in an outside tank, was beginning to smell very unpleasantly, and as the smell increased, we sent a man on to the roof to examine the tank. He presently reappeared with a bucketful of sparrows, in various stages of decomposition, which he had fished out of the tank. Whether they deliberately committed suicide, in order to be revenged on us, or whether their agitation and despair at finding themselves homeless drove them to such desperate measures, perhaps the readers of NATURE NOTES will help us to decide. Certain it is that since the cleaning of the tank the suicides have ceased, the water has been pure and fresh as soft water should be, and the sparrows have led a retired life among the chimney stacks, as if they were conscious of a more than usually heavy burden of wrong-doing.

Moore, near Warrington. MARY L. CONGREVE.

Jumping Beans.—Visitors to the Indian Exhibition, held this summer at Kensington, were much amused to watch the lively movements of the so-called "Jumping Beans" which were to be seen at one of the stalls. Some of these beans were given me last December (1894), and wishing to know something of their life history, I searched through my library, but the only notice I could find was the following extract from Professor P. Martin Duncan's *Transformations of Insects*. Speaking of certain fruit-eating moths belonging to the *Carpocapsidæ* he says: "Some of the caterpillars of these fruit-eaters move very actively in the insides of the seeds or fruits they are devouring. M. Lucas had some large Euphorbia seeds which came from Mexico, and which, when exposed to gentle heat, jumped up a few lines into the air. It was difficult to account for this, but it was found that the movements were produced by the caterpillar inside jumping about." For many months my seeds continued their jerking movements, but at last they all became quiet and I feared the caterpillars might have died. Last week, however, I was greatly pleased to find that a grey and brown moth had hatched out of one of the seeds, and of course I carefully preserved it as a museum specimen. There are some things about its hatching which are very puzzling, and I should be grateful for information on these points. The seed case had a perfectly round hole bored on one side through which the chrysalis must have wriggled out, as I found the empty chrysalis outside the seed. Does the caterpillar partly bore the hole before it turns into the pupa state? I can hardly believe either the chrysalis or moth could pierce the hard-shelled seed, and yet on examining the other seeds I can see no trace of the hole through which the moth is to emerge. Since I have had to keep these beans for nearly a year before they hatched I thought those who had purchased specimens at the Indian Exhibition would like to know that they must preserve them for twelve months if they wish to see the perfect insect.

ELIZA BRIGHTWEN.

Swallows at Chichester.—Notwithstanding the several sharp frosts we have lately had the swallows are still flying about in this neighbourhood. This afternoon I counted more than a dozen in one field, which is always a favourite haunt of theirs; these birds are all house martins, and no doubt are late broods, which were not strong enough to migrate last month. A year ago there were also many left behind, and I noted a few flying about up to, and including December 22; after that day none were seen. This year the first martin arrived at Fishbourne Mill Pond on March 23, and we have had them, more or less, with us for more than seven months. A pair of swallows chose a curious place for their nest here this summer. In a wood shed an old coat was hanging by the collar to a nail at the side; the birds built their nest at the apex, making it very shallow. I am sorry to add that just as the hen began to sit, a stray cat tore the whole structure down.

Fishbourne, Chichester. ARTHUR EVERSHED.

Musical Mice (p. 198).—Last winter I had a similar experience to that related by "C. E. C." About ten o'clock one night sounds of music suddenly began to issue from my piano, causing me considerable astonishment. I soon, however, discovered the musician to be a mouse, which seemed to experience great delight from running over the wires. I am certain this mouse enjoyed the musical sounds thus produced, as it came regularly night after night, always about the same time. Feeling at last that some damage might be done to the instrument, I eventually placed a mouse-trap inside the piano, with the result that the poor little musician was caught. Though I have found house mice in the same room since, I am not aware that another has found his way to the interior of my piano.

Weybridge. J. E. TARBAT.

Nesting of the Spotted Flycatcher.—Mr. W. H. Hudson in his *British Birds* (pp. 117, 118), makes the statement that this species raises but one brood in the season. What happens in the south of England I do not know, but here in North Lancashire it does have more than one. In 1892 I was living in a house on a hill side, with nothing of an equal height in front,—S.S.W.,—for some fifteen miles. Early in the summer a pair of spotted flycatchers built a nest of moss and half decayed leaves on the label-end, over one of the windows: they had one brood. In 1893 the first brood got away early and safely; the nest was renovated, and four eggs laid and hatched, and the young birds soon disappeared. In 1894 the parents returned to the old nest, re-made it and reared five young ones. The nailing up of some long shoots of Dijon rose disturbed them in their second building, and they altered the position to a higher window-label, and almost destroyed the first nest to build the second. This family got away in good time before the frost. In 1895 the birds built in the first locality, and when I gave up possession of the house on July 1, the young birds were partially feathered. The owner of the house thought that the *Ampelopsis Veitchii* and Dijon roses had been allowed to have too much of their own way and clipped them to a more reasonable size. Possibly there was no second brood after this disturbance. An ornithologist of my acquaintance says in other parts of England it is not an uncommon occurrence with these birds.

Ulverston. L. PETTY.

TO CORRESPONDENTS.

M. R.—(1) Lady's Smock (*Cardamine pratensis*). (2) Wall Rue (*Asplenium Ruta-muraria*). (3) Heath Bedstraw (*Galium saxatile*). (4) Common Polypody. (5) A species of *Sedum*. (6) *Hypnum cupressiforme*. Specimens all in very bad condition.

A. B. C.—(1) *Bryum capillare*. (2) *Plagiothecium denticulatum*. (3) *Thuidium tamariscinum*. (4) *Hypnum purum*.

G. W. K.—The note contains no original observation, and our want of space precludes its insertion.

WE must request those who favour us with their communications to observe the following rules. We cannot undertake to notice the contributions of any who fail to comply with them.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, or to return them.

3. All communications for any number must be in the Editor's hands by the 15th of the preceding month.

4. Communications for NATURE NOTES should be addressed to the Editor, JAMES BRITTEN, F.L.S., 18, West Square, London, S.E., as should specimens for naming, books for review, &c. The Editor cannot undertake to reply privately to questions.

5. Letters connected with the Selborne Society, as well as all enquiries as to the supply of NATURE NOTES, and subscriptions, should be addressed to the Secretary of the Selborne Society, A. J. WESTERN, Esq., 20, Hanover Square, W.

6. The Editor is not responsible for the contents of the last page of each number: communications respecting this page must be addressed to Mr. WESTERN, as above.

SELBORNE SOCIETY NOTICES.

Special General Meeting.—This was held on November 5, at the Society's Rooms, 20, Hanover Square, W., in accordance with notice given last month, when the following additional rule was adopted :—

RULE XVIIA.—That a junior branch may be formed at a school or elsewhere, of persons under age, upon the written application of an adult, who shall be held responsible for the conduct of such branch, shall be a full member of the Society, and shall represent the branch upon the Council.

That junior branches be subject to the general rules of the Society, with the following exceptions :—

(*a*) That the subscriptions of members of junior branches be fixed by their respective Committees, but only such members as subscribe 5s. per annum and upward shall be full members of the Selborne Society.

(*b*) That no payment be due from junior branches to the General Fund except an annual subscription of not less than 5s.

(*c*) That each junior branch be entitled to receive the magazine.

(*d*) That the members of junior branches be styled Associates of the Selborne Society.

At the Council Meeting held on October 1, Rev. H. E. Bull was elected a member of the Council, and Mrs. Percy Myles was elected Hon. Librarian. Gifts of books, or donations towards the purchase of books, will be gladly received.

Council and Committee Meetings.—The next meetings of the Council will be held on Tuesday, December 3, and Thursday, January 2, at 5.30 ; of the Magazine and Leaflet Committee on December 18, and Thursday, January 16 at 5.30 ; of the Finance Committee on December 18, and January 16, at 6.30.

Commencing with the New Year all Council and Committee Meetings will be held on the first and third Thursdays in each month.

BRANCH CONTRIBUTION.

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NEWS FROM THE BRANCHES.

Bath.—The Council has received notification of the resignation of the Hon. Sec., Dr. George Norman, who will, however, still retain the Treasurership of the Branch. Mrs. Wheatcroft, of 27, Rivers Street, has kindly accepted the post in his stead. The opening Conversazione took place on November 2, when the Rev. H. H. Winwood read a most interesting paper entitled "A Geological Ramble," in which he dealt with the local gravel deposits, and advanced interesting theories accounting for them. The lecture was illustrated by the limelight, under the able manipulation of Mr. E. J. Appleby.

Clapton.—The first meeting of the Winter Session was held on November 2, when an interesting paper on "Some Marine Boring Animals" was read by Miss Edith J. Temple.

Croydon.—The meetings of the Branch arranged for the Winter Session were opened on November 12, when the Hon. Sec. lectured on "A Chat about Coal," before the West Croydon Social Institute. There was a large audience present. The lecture was illustrated by numerous diagrams and fossils.

EDWARD A. MARTIN,
Hon. Sec. Magazine and Leaflet Committee.

No. 61. Vol. VI. January, 1895.

NATURE NOTES.

THE MAGAZINE OF THE

Selborne Society,

WITH WHICH IS INCORPORATED

"THE FIELD CLUB."

EDITED BY

JAMES BRITTEN, F.L.S

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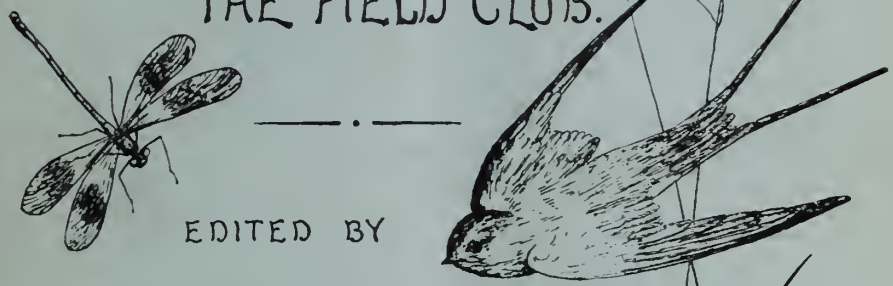

EDITED BY

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THE MAGAZINE OF THE

Selborne Society,

WITH WHICH IS INCORPORATED

"THE FIELD CLUB."

EDITED BY

JAMES BRITTEN, F.L.S

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NATURE NOTES.

THE MAGAZINE OF THE

Selborne Society,

WITH WHICH IS INCORPORATED

"THE FIELD CLUB."

EDITED BY

JAMES BRITTEN, F.L.S

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"THE FIELD CLUB."

EDITED BY

JAMES BRITTEN, F.L.S

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